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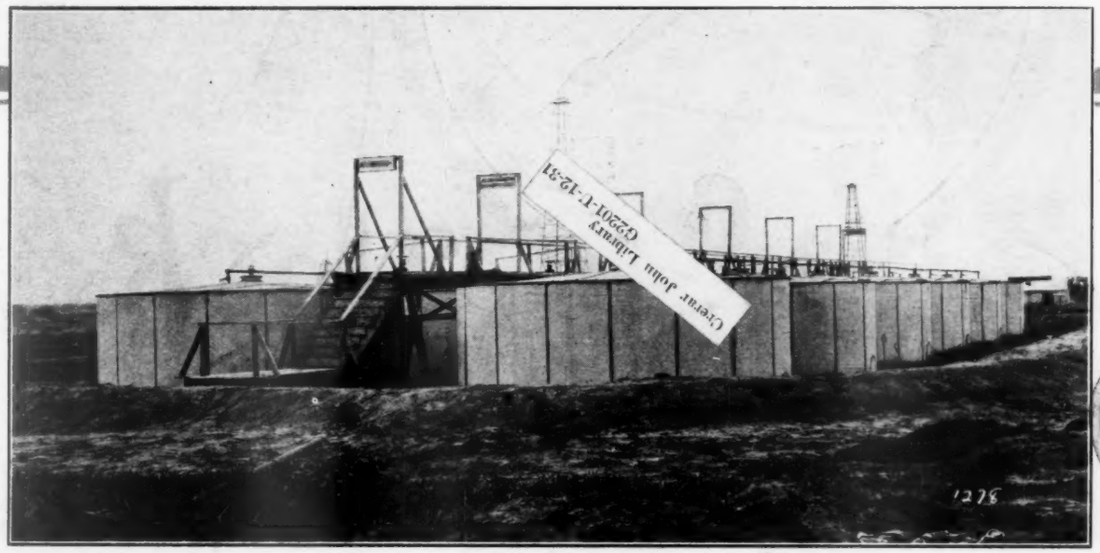

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Crude Price Increase Talk Is Current

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Big Completions in West Texas and Increased Pipe Line Facilities There, However, Deserve Careful Consideration

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

An undercurrent feeling that a crude price readjustment upward may be expected by the first of the year seems prevalent although operators admit that, as far as they can determine, conditions have not changed sufficiently to warrant higher prices at this time. It is conceded a substantial decline in the production of the greater Seminole area may be expected as soon as the effect of shooting wells there has passed. The increase in output of that section during the past week was due entirely to the shooting of wells which increased their production temporarily. These wells will decline more rapidly, probably, within a short time.

On the other hand the completion within the past few days in the Yates Pool in West Texas of two wells, one of which gauged 2,059 barrels in 45 minutes from 955-93 feet and the other which made 640 barrels an hour from a depth of 1,193-1,305 feet (with 112 feet of sand), serves to emphasize the importance of that section and the potential production available there when pipe line facilities are provided. The fact additional pipe lines are planned for that area and that large shipments of the crude are being made to refineries indicates progress is being made in overcoming the difficulties in handling and refining the crude due to its sulphur content.

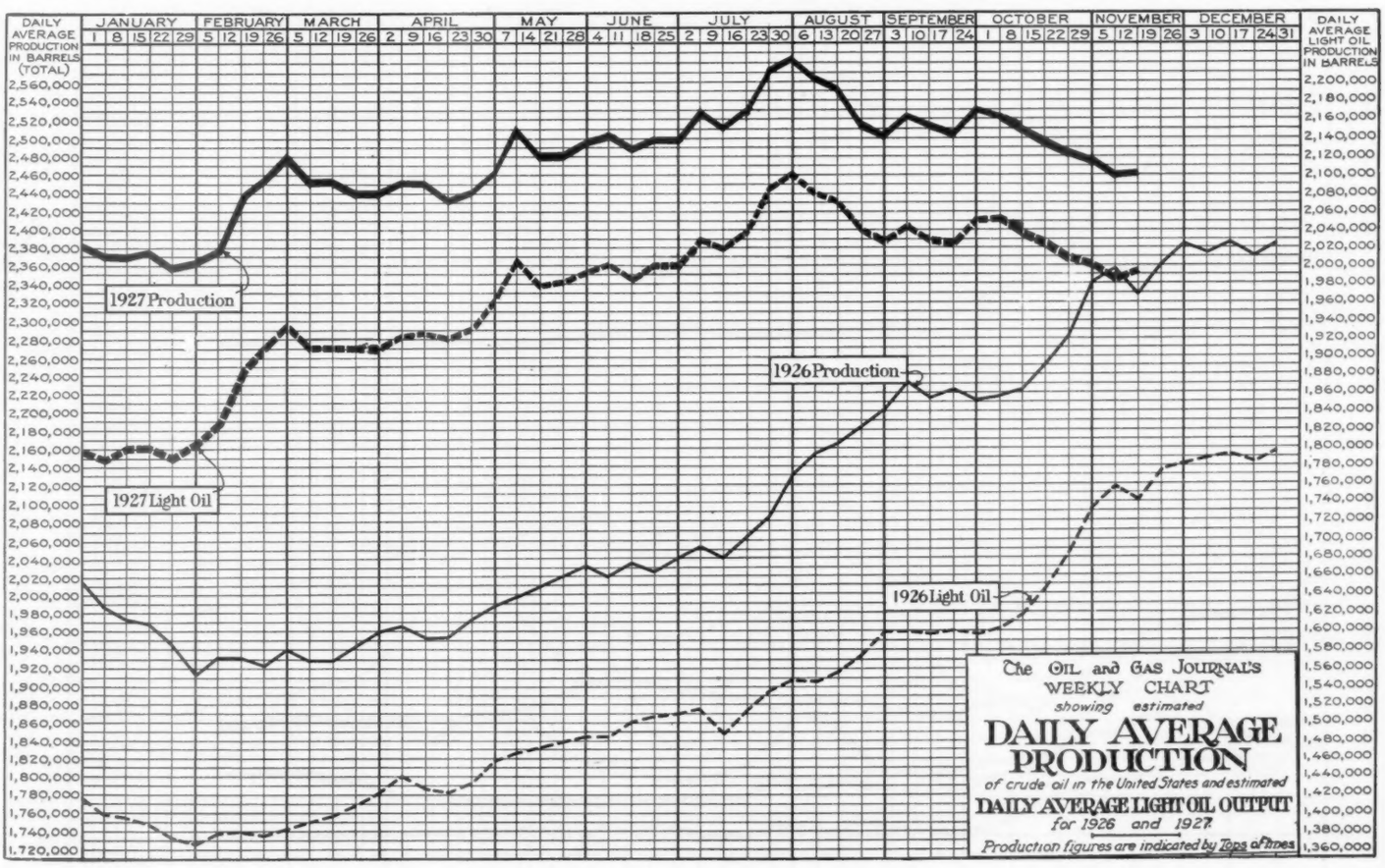
With a field being developed where 2,745 barrel-an-hour wells are completed at a depth less than 1,000 feet and a large increase in pipe line capacity for the field probable within the very near future, the time hardly seems propitious to even talk of an increase in crude oil prices. However, there are many operators who would not be surprised if an advance, in certain areas at least, would be announced around the first of the year.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended November 12, and a comparison with the previous week follows:

	Nov. 12		Nov. 5	
Oklahoma—	Light	Heavy	Light	Heavy
Tonkawa	16,735	.....	16,880	.....
Burbank	39,285	.....	38,810	.....
Other Osage Fields	30,470	.....	30,540	.....
Cushing and Shamrock	21,220	.....	21,185	.....
Bristow and Eastern Bristow	24,935	.....	24,950	.....
Cromwell	11,180	.....	11,060	.....
Garber	10,165	.....	10,120	.....
Blackwell-Braman	8,770	.....	8 815	.....
Seminole	422,410	.....	404,755	.....
Wewoka	12,165	.....	12,680	.....
Northern Miscellaneous	110,415	.....	110,195	.....
Southern Fields	61,445	.....	61,480	.....
Total Oklahoma	769,195	.....	751,470	.....
North Louisiana	40,935	9,115	40,770	9,165
Arkansas	23,790	75,345	22,880	76,225
North Central Texas	141,110	.....	142,510	.....
West Texas	209,832	.....	213,606	.....
Texas Panhandle	83,680	.....	85,985	.....
East Central Texas	29,577	.....	29,634	.....
Kansas	107,810	.....	107,145	.....
Total Mid-Continent Area	1,405,929	84,460	1,394,000	85,390
Gulf Coast	.....	139,543	.....	143,323
Southwest Texas	.....	28,595	.....	28,601
Eastern	114,000	.....	114,000	.....
Rocky Mountain Area	73,833	.....	73,498	.....
California—				
Santa Fe Springs	39,000	.....	39,000	.....
Long Beach	103,000	.....	101,000	.....
Torrance	3,000	17,000	3,500	17,000
Huntington Beach	59,500	.....	60,000	.....
Dominguez	14,750	.....	15,000	.....
Rosecrans	7,500	.....	7,750	.....
Inglewood	20,000	12,000	20,500	12,000
Ventura Avenue	52,500	.....	55,000	.....
Seal Beach	50,000	.....	51,500	.....
Remainder of State	55,000	186,000	55,000	186,000
Total California	404,250	215,000	408,250	215,000
Total United States	1,998,012	467,598	1,989,748	472,314
Grand Total	2,465,610		2,462,062	

Total Increase, 3,548 Bbls.; Light Oil Increase, 8,264 Bbls.



Export Purchases Feature Market

Sales of Oklahoma Gasoline and Kerosene to Foreign Buyers Offset Slow Domestic Demand. Fuel Oils Weak

By W. T. Ziegenhain

The general refined oil market in Oklahoma continues to mark time while opinions varied in regard to the trend over the balance of the year. U. S. Motor gasoline has shown no change in price while the volume of sales has been good. Inquiries for large volumes of the low endpoint gasolines have lent strength to that market, but there has been no advance in prices.

Kerosene has witnessed a recovery as a result of large purchases made for export movement, but because of the large amount of material available the purchases did no more than stabilize what otherwise appeared to be a gradually declining market. Natural gasolines showed added weakness as the domestic demand was not sufficient to take care of all the material being offered. The great volume of production in the Seminole, now running near 100 cars daily, has proved to be a big factor, and with few export purchases being made from this area, the immediate future for that market is not encouraging. Fuel oils and gas oil were very weak as excess material was being offered from practically all refining centers. Lubricants and wax are witnessing an intermittent demand as prices remain unchanged. Distillates proved a little more popular through inquiries but there was plenty material available to satisfy the demand.

Export Purchases

Export purchases of the low endpoint gasolines have been coming in slowly but their volume has been a big help in relieving market of what might develop into distress material. The Atlantic Refining Company is reported to have purchased 2,000,000 gallons of 61-63 gravity 390 endpoint gasoline at 6½ cents and inquiries for 500 cars of the same material was received from another source but to date the sale is still pending.

With the demand for the lower endpoint gasolines holding up fairly well regardless of the shipments made on export purchases, there has not been any really "distress" gasoline on the market. Even though there is a large production it is difficult to gain an option on large volumes without materially strengthening the price and a condition soon results where the delivered cost at the Gulf on Oklahoma material is higher than the market prevailing on the Gulf. This fact again emphasizes the advantages of a low transportation cost. When these shipments are made from Oklahoma it usually means the Gulf refiners and the North Texas refiners are sold up or distress material is available in Oklahoma, and neither of these conditions exist at this time.

Gasolines and Naphthas

The U. S. Motor gasoline prices have remained unchanged since about the first of October and they showed but little change during the month previous to that date. At times the demand allowed refiners to get 6⅛ cents for material they had previously been shipping for 6 cents and at other times, refiners who held to the 6¼-cent price in their regular quotations were forced to take 6 to 6⅛ cents in order to hold the business. But in general the range of 6 to 6¼ cents over the entire period would apply and most opinions are that this range represents the bottom and we may expect prices to advance slowly over the balance of the year. Others expect this condition of unchanged gasoline prices to continue well over into next year. Only in a very few cases is there thought of prices crumbling

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REFINED MARKET BAROMETER

Exports of gasoline and kerosene relieved the tension in the general market for those products, particularly along the Atlantic Coast and in the Mid-Continent. Although no price changes resulted, refiners were more optimistic than last week. Fuel oil was decidedly weaker in practically all refining centers. Gas oil exports from Atlantic ports increased materially and gave strength to what has been a sluggish market. Lubricants were weaker at all points east of the Rocky Mountains as Gulf Coast refiners forced their products further into the Mid-Continent and Atlantic Coast markets at reduced prices. Wax inquiries tended to strengthen the market, but the demands were not sufficient to cause a price advance. Natural gasoline weakened materially in the Mid-Continent as a result of increased production along with the lesser export demand.

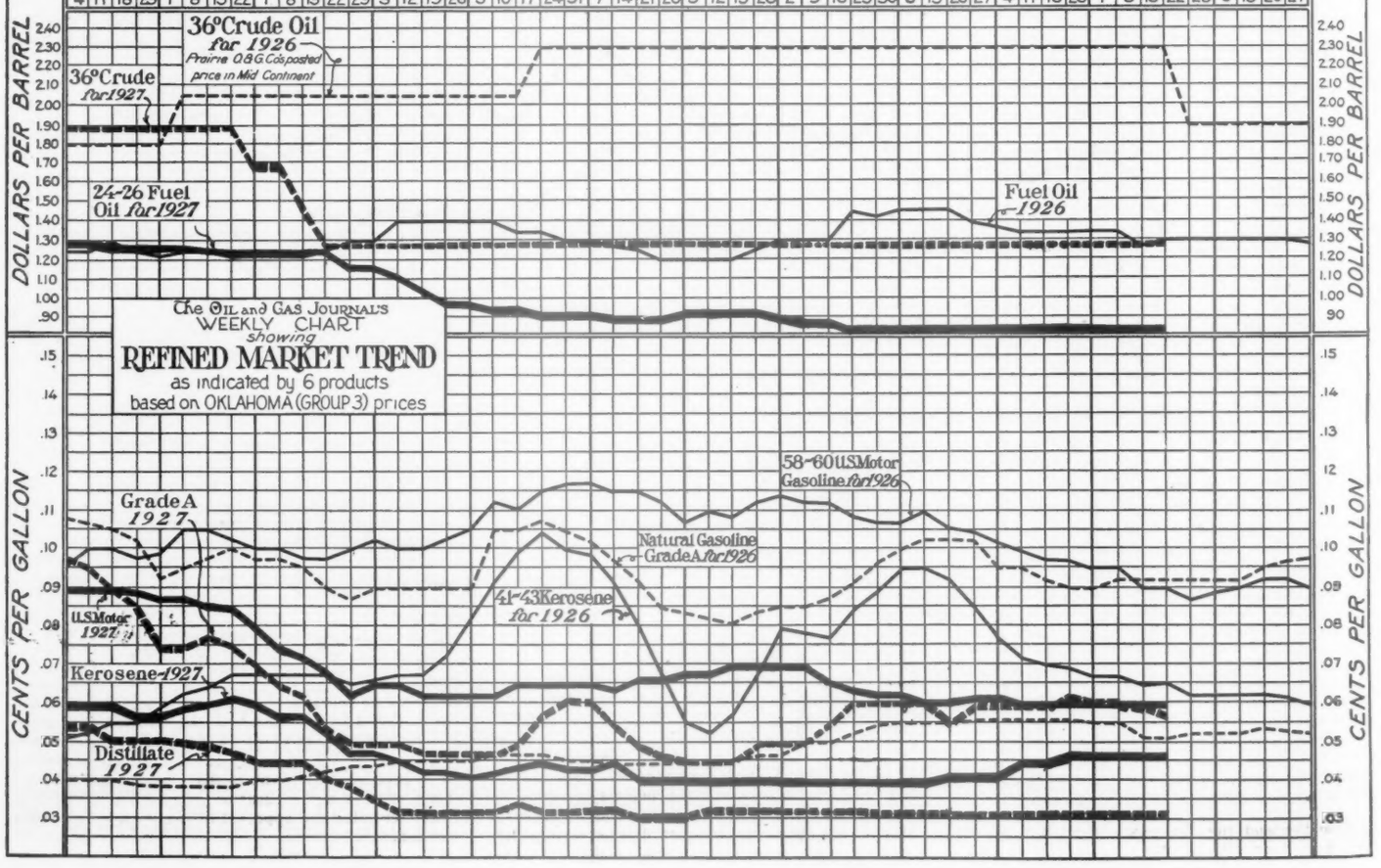
Atlantic Coast—Less distress gasoline was apparent and the retail situation is generally improved. This has been occasioned by the scarcity of clean tankers. Shipments of gas oil to European refineries for cracking has given strength to this market. Fuel oils were generally weak as large quantities of West Texas crude is being skimmed, the light fuel oil being dumped on the market at reduced prices. Lubricants were in fair demand, but cylinder stock prices showed signs of weakening. Wax inquiries increased, but there was no change in prices. Exports of all oils have materially increased and have given the market a more optimistic outlook.

Pennsylvania—A lesser demand for gasoline and kerosene added weakness to the general market. Fuel oil and neutrals were decidedly weaker, while cylinder stocks remained unchanged.

California—No price changes resulted from the generally improved market situation. There was a continued good demand for gasoline within the state and the export movement was normal. Natural gasoline prices remained the same and the general tone of the market was firm, but the prices over the next few weeks are threatened by the rapid increases being made in production.

Chicago—The market was generally quiet as trading was restricted to the slow movement of gasoline and light fuels. Export shipments of kerosene from the Mid-Continent helped to stabilize that market.

Gulf Coast—Offering of large quantities of lubricants, particularly the filtered viscuous grades, gave this market added weakness. Fuel oil and gas oil showed no change as prices were maintained to exclude west Texas products.



Survey of Petroleum Situation Abroad

Developments in Spain, France, Great Britain, Irak, South America and Other Places Affect Interests Here

By Special Correspondent

The Spanish Petroleum Monopoly has occupied the attention of American petroleum interests during the past few weeks. For a time it seemed as if this particular piece of foreign legislation was doomed to die a natural death, due to the opposition of the older foreign companies established in Spain, but once it became known that sales contracts were being negotiated, opposition to the monopoly in principal rapidly gave way to a stampede for sales which resulted in a large volume of business in gasoline, gas oil and crude being booked from Gulf ports during the next 60 days.

The Spanish Petroleum Monopoly plans to allow the present distributors of lubricating oil in Spain to continue to sell under existent registered brands, but such distributors must purchase their supplies from the monopoly which will handle the importation of all petroleum products, and, with the exception of lubricants, handle all distribution. The Spanish officials of the monopoly have repeatedly reiterated their favorable disposition toward purchasing from American interests. A number of American companies are reported to have negotiated satisfactory sales contracts. It is reported that the Sun Company, Atlantic Refining, Phillips Petroleum, Venezuela Royalty Company, American Republic Export Corporation and others are keenly interested. The real difficulties of the monopoly start with the expropriation of oil properties for which an official delegation has been appointed.

The impetus given to French plans for a State Petroleum Monopoly which again comes up for discussion on January 1, 1928, by the action of Spain will be awaited with interest.

French Imports Increase

Despite the efforts of the French Government to develop a domestic industry to satisfy its national requirements of liquid fuels, small success has resulted. French imports of liquid fuels and petroleum products have steadily increased from 1,562,182 metric tons in 1924 and 1,954,030 metric tons in 1925 to 2,028,284 tons in 1926. In 1926 refined petroleum made up of 260,532 metric tons; gasoline, 1,063,663 tons; lubricating oils, 309,231 metric tons and residues, 403,858 tons. As compared with these imports the domestic production of petroleum amounted to 68,297 tons; of benzol 60,000 tons and carburant alcohol 22,684 tons, or a total of 150,981 tons, roughly 7 per cent of the total imports, or about 10 per cent if compared with the total imports of refined petroleum products during the same year.

It is interesting to note that although the French regulations call for a purchase by the importers of gasoline of an amount of alcohol equivalent to 10 per cent of their gasoline imports, the French Government has been unable to supply this proportion.

On the basis of the imports in 1926 the importers should have received from the Government 106,000 metric tons of alcohol, whereas, the amount made available for the purchase by the Government was only 22,684 metric tons, or only one-fifth of the amount which they are supposed to receive by the law imposing this purchase upon them.

French Requirements

Indicative of the growth of France's needs, particularly for gasoline and lubricating oils, it is interesting to note the increase in registration of passenger automobiles and tractors since 1914 as given by the official statistics:

1914	100,000
1920	202,500
1921	236,146
1922	290,303
1923	444,812
1924	572,243
1925	721,506
1926	809,179

In New Zealand the Taranaki Oilfields, Limited, report that their "Waipu No. 2 well" in the district to the north of Gisborne was drilled to a depth of 20 feet and that their "Gisborne No. 1 well" in the same neighborhood was drilled to a depth of 650 feet in sandy shale. The Murchison Oil Company reports that their bore to the north of Gisborne has reached a depth of 3,200 feet in mudstone and sandstone, or sandy shale, and the drilling has been suspended to make some necessary repairs.

Interests in Irak

The recent gusher brought in by the Turkish Petroleum Company in Irak has been followed by the announcement that five American companies the Standard Oil Company of New Jersey, Standard Oil of New York, Pan American Petroleum and Transport, Gulf, and Atlantic Refining share in a 25 per cent interest, equalled by three other groups; Dutch, British, and French, all of which are subject to an overriding royalty interest of the Armenian capitalist, Mr. Gulbenkian.

It should be noted in passing that when it is considered that the net results of the Chester Concession and those concessions previously held by the Sinclair, Standard and other American interests is today a 23¾ per cent interest divided among five American companies as compared with a 47½ per cent interest controlled by British-Dutch interests in the same organization further supported by Anglo-Persian interests in nearby territory, and all in territory predominantly under the political control of Great Britain, small credit remains to American insistence of fair play and maintenance of "open door" policy.

It will be remembered that on June 14, 1926, the Irak Parliament ratified the extension of the Anglo-Persian Oil Company's concession in the so-called "Transferred Territories" and immediately Yassin Pasha al Hashimi, chairman of the Finance Committee of the Irak Parliament, resigned in protest.

Article 15 of the convention made on March 14, 1925, between the Irak Government and the Turkish Petroleum Company, Limited, reads in part to the effect that petroleum products required by Irak shall be sold in Irak at 35 per cent less than the wholesale price at Swansea, Wales.

Article 5 (a) of the agreement, made on May 24, 1926, between the Irak Government and the Anglo-Persian Company provides for the sale of this company's products in Irak on the basis agreed upon by the Irak Government and the Turkish Petroleum Company under the formula provided for in the Turkish Petroleum Company's Convention of March 14, 1925, but "until such prices have been fixed by the Turkish Petroleum Company, the company agreed to arrange with the Irak Government basic prices ex the 'Transferred Territories' refinery and not in excess of the prices that would result from that formula."

Transferred Territories

Meanwhile the Anglo-Persian Oil Company has been very successful in bringing in rich wells in the so-called "Transferred Territories" near Khanikin on the Persian border. The Khanikin Oil Company, Ltd., a subsidiary of the Anglo-Persian Company, Ltd., formed to operate this new field in the so-called "Transferred Territories," having obtained oil in commercial quantities has erected a refinery and during the past several months has put oil on the local market at prices which have aroused considerable criticism.

According to unofficial reports the Khanikin Oil Company recently submitted to the Irak Government a list of reduced prices at which the said company was proposing to sell petroleum products in this area at an early date. Instead of the prices being at 35 per cent less than the Swansea prices, as everyone expected, or, in other words, instead of the proposed prices being about 40 per cent less than those at present obtaining in Irak, a reduction is proposed of not more than 10 per cent which is arrived at by the Khanikin Oil Company of the Khanikin refinery to the prices resulting from the formula.

The members of Irak Parliament are united in their opinion, and it is even rumored that, if the Khanikin Oil Company insists on such prices it is proposed that the members of the Ministry, which granted the concession, shall be tried by the High Court provided for by Article No. 81 of the Organic Law on a charge of having failed in their duty and that efforts be made to cancel the extension of the concession. All this clearly points the way to the opposition which American interests may expect to encounter in this part of the world.

Colombia

In Colombia, according to latest reports, the Minister of Industries Montalvo is attempting to railroad legislation nationalizing petroleum in Colombia as an emergency measure before the Senate. Considerable reaction to the Yates Anglo-Persian contract demanded that such radical legislation be considered immediately before public opinion violently opposed any such political maneuver. Well informed circles state that there is small likelihood of this nationalization bill or the Yates contract receiving the approval of the Senate in regular session.

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INTERESTING DEVELOPMENTS

Activities of American companies in negotiating contracts with the newly created Spanish Petroleum Monopoly; the increase in quantity of petroleum products imported by France; the possible field developments resulting from the completion recently of the gusher in Irak; and other accurate data relating to the petroleum situation in South America, Russia and other countries are contained in the accompanying article which is the second published since The Oil and Gas Journal arranged for a special monthly survey of the petroleum situation abroad. The first survey was published in the October 20 issue of The Oil and Gas Journal.

Growing importance of operations and developments in the principal oil producing and consuming countries abroad to the petroleum situation in the United States makes it imperative that every oil man in this country keep in touch with these operations and developments. As has been pointed out previously the crude petroleum situation in the United States is affected directly by foreign production while refiners are interested in developments abroad which affect the importation by different countries of refined products.

A complete survey of the petroleum situation abroad will be published in The Oil and Gas Journal each month while high spot developments will be published each week as they occur.

A.P.I. Session to be Working Meeting

Motor Fuel, Standardization, Refinery Technology, Accounting, Taxation Research and Regulation to Be Topics

The eighth annual meeting of the American Petroleum Institute at Chicago will be strictly a working meeting.

Twenty or more institute committees, with an aggregate membership of roundly 750, will meet immediately preceding the official sessions to discuss subjects of importance to our industry. The work of these committees is testimony of the serious fashion in which men of the industry are tackling and solving problems which are susceptible of co-operative handling.

The board of directors, composed of 61 representative men who are well known in and out of the industry, will be in session all of three days—December 5, 7 and 8. The board will consider the reports of numerous committees and discuss and act upon a variety of matters materially affecting the industry.

The terms of office of the follwing directors expire concurrently with the Chicago meeting: Mark L. Requa, B. B. Brooks, W. C. Franklin, J. D. Collett, Frank Phillips, J. Edgar Pew, E. W. Clark, T. A. Dines, P. M. Miskell, F. A. Pielsticker, Charles L. Suhr, E. T. Wilson, H. B. Earhart, A. P. Coombe, H. E. Felton, A. B Macbeth, D. E. Buchanan, Herbert L. Pratt, E. L. Doheny, J. F. Lucey, George H. Jones, Wallace E. Pratt, E. C. Lufkin, Thomas A. O'Donnell, William N. Davis, E. B. Reeser, H. F. Sinclair, George S. Davison, J. W. VanDyke, Henry L. Doherty, L. V. Nicholas, W. S. Fitzpatrick and D. M. Folsom and one place made vacant by the death of J. C. Donnell.

The vacancies created by these expirations will be filled in the following manner. The board of councillors, composed this year of roundly 540 oil men, will meet in executive session and choose their nominees for directors. This board will report its nominations to the general session meeting of institute members. These members will then act upon the report and elect whomsoever they desire as directors. There is only one exception, namely, that the board of directors, after the newly elected directors have been seated, elect directors to fill 3 out of the 34 vacancies.

Due to the demand for group sessions where specific topics can be discussed and to the pressure of business on the docket of the board of directors, only one general session will be held—the afternoon of December 6. The president of the institute will give his address and the report of the board of councillors will be received and the election of directors take place. At this session will be shown the new six-reel petroleum industry moving picture film, "The Story of Petroleum," made under the direction of the Bureau of Mines in co-operation with the institute.

Session on Motor Fuel

The group session on motor fuel will be of especial interest to all those interested in the motor fuel research program which has been under way at the Bureau of Standards the past several years. The work has been financed jointly by the institute, the National Automobile Chamber of Commerce, the Society of Automotive Engineers and the Government. Three papers covering distillation tests, engine acceleration and detonation will be presented by Government representativs, and one on methods of measuring the antiknock characteristics of motor fuels.

The co-operative research on motor fuel of these organizations has been in existence for a number of years and has proven of value in securing the solution of problems of common interest to the automotive and petroleum industries, and has thus benefited the public. Every car owner is interested in quick starting and rapid acceleration and some of them are also interested in the antiknock rating of the fuel.

The antiknock rating is important from the standpoint of the degree of compression that can be obtained in the automobile engine without knocking. The higher the compression, the greater the mileage from a gallon of gasoline; but higher compression results in increased tendency to knock, with the result that the antiknock rating of the gasoline determines the design of the engine as regards allowable compression. Some car manufacturers are taking advantage of the increase during the past few years in the antiknock rating of gasoline sold throughout the country to increase the compression of their engines.

Standardization Sessions

Two sessions have been arranged for those interested in standardized oil field equipment. Besides brief reports of the 10 committees developing standard specifications there will be interesting and authoritative papers relating to the value and use of equipment made in accordance with the standard specifications. It is expected that these two group sessions will appeal especially to oil company purchasing agents and field superintendents.

Aside from the report of the committee on Uniform Methods of Accounting and the open discussion related to the uniform practice which the committee will recommend, all oil men engaged in the accounting end of the business will find the papers to be presented at the two group sessions on oil accounting of value. Co-operation between executives and comptrollers, machine handling of accounts payable, realization methods in refining costs, gasoline taxes in accounting, I. C. C. classification of pipe line accounts and handling refinery accounts will be topics of discussion as well as such other items which the accounting men present wish to discuss.

Railroad and motor truck transportation will be the topic for one group session. Traffic and transportation men will find a discussion of problems incident to developing a uniform side track agreement, led by a representative of the carriers, of especial importance. Handling fleets of motor truck equipment and the use of motor vehicles in transporting oil products will be thoroughly discussed in two papers and otherwise and should make this group session attractive to men struggling with motor truck problems.

Refinery Technology

All refinery men will be interested in the Refinery Technology group session where such problems as pipe still distillation, recovery of acid from sludge, vacuum distillation, vapor phase cracking and improved methods of treating cracked naphtha will be discussed.

Fire Prevention and Safety are kindred subjects about which every oil man is concerned. Interesting topics will be presented for discussion at this session such as successful method of protecting plants from fire, what static electricity is and how it is produced, fire laws for the industry and what the Petroleum Section of the National Safety Council, composed of oil men, is doing to aid in the prevention of accidents in our industry.

In the evening of December 7 three group sessions have been arranged without programs. It is expected that the refinery technologists, the development and production engineers and the oil accountants will have numerous problems for discussion which cannot be taken up and discussed in round table fashion at the group sessions where programs have been arranged. These three sessions will give them ample opportunity for full discussion.

New Divisions of Institute

Committees have recommended the creation of several new divisions of the Institute's activity, namely, a Division of Refinery Technology, a Division of Production Engineering and a Division of Oil Accountancy. If, after consideration of the recommendation and the financial problems involved in enlarging the Institute's activity, the board of directors authorize the formation of these new divisions, the members of the Institute present can, at the sessions referred to, proceed to make effective whatever plan of organization that may be authorized, including the election of chairmen and vice chairmen and discussion of plans for divisional activity.

The group session on Taxation—Federal, State and Municipal, with papers by the former assistant to the Secretary of the Treasury and an oil attorney with wide practical experience in state and municipal taxation problems will attract wide attention and the discussions of problems of taxation which follow should be of value to the entire industry.

Corrosion of oil industry equipment is a topic of wide interest and discussion. Two group sessions will be held when the whole subject will have appropriate discussion. A special committee has recommended that the industry attack cooperatively some or all of these corrosion problems and this committee will present the result of information it developed which led it to make the recommendation. The committee is arranging an exhibit of protective coatings.

One group session is to be devoted to a discussion of problems related to the marketing end of the business. Discussions of extending credit, of the problem of furnishing equipment to dealers, of fields for increasing consumption with especial emphasis on the domestic house heating outlet and a paper entitled "Double Standards" will make this session interesting to those engaged in marketing petroleum products.

Research and Regulation

There is being expended under the Institute's direction a $500,000 fund, provided by John D. Rockefeller and the Universal Oil Products Company, for fundamental research in petroleum. The National Research Council formed a Central Petroleum Committee to co-operate with the Institute in the selection of projects for investigation and the personnel to conduct same. Many projects are under way in various American colleges and universities. Papers are to be presented at a group session by the Chairman and two members of the Central Petroleum Committee. One is a physicist, one a chemist and one a geologist. Following these papers, it is expected to have a round table discussion with especial reference to cooperation between technical men of the industry and the research fellows.

Another group session that will create widespread interest is the one on Regulation—Federal, State and Municipal. Papers will be presented by able oil attorneys who have had contact with regulation of the oil man's business from all angles and a general discussion of the problem will follow.

The closing event of the Annual Meeting will be the Annual Dinner, during which the famed organization of oil men known as the California Wildcats will produce a playlet entitled "So's Your Oil Man." Tickets are $6 each. Application should be made promptly to Institute headquarters, New York, for reservations.

The Institute does not make hotel reservations for its members. The meetings are to be held at the new Stevens Hotel, Chicago, and all who expect to attend should not delay writing or wiring the hotel for accommodations.

The usual one and one-half railroad fare on the "Certificate Plan" will apply for all members attending the meeting. Certificate should be secured from the railroad agent when buying tickets and validated at the Institute's Registration and Information desk in the Stevens Hotel.

All indications point to the largest attendance ever had at an A. P. I. meeting.

BAR ASSOCIATION'S COMMITTEE ON CONSERVATION IS SELECTED

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 14.—Gurney E. Newlin of Los Angeles, Calif., chairman of the minerals section of the American Bar Association, has appointed a committee of nine to consider and report upon laws and proposals relating to the conservation of mineral resources within the United States. From this committee there will be appointed a committee of three to confer with similar committees to be appointed by Secretary Hubert Work, chairman of the Federal Oil Conservation Board, and by the American Petroleum Institute, with the object of considering legislation for the conservation of petroleum and its products.

The Bar Association's committee of nine was announced today by Peter Q. Nyce, secretary of the minerals section of the American Bar Association, as follows:

Chairman, Chester I. Long of Wichita, Kans., former United States senator from Kansas and recent president of the American Bar Association.

James A. Veasey of Tulsa, Okla., nonresident lecturer on the law of oil and gas at the University of Michigan and general counsel of the Carter Oil Co., Tulsa, Okla.

Warren Olney, Jr., of San Francisco, Calif., former associate justice of the supreme court of California; Mr. Olney is connected with the law firm that represents the Royal Dutch Shell Co.

James W. Finley of Bartlesville, Okla., former state district judge and state senator of Kansas, and present general counsel of the Empire Oil Co., Bartlesville, Okla.; Mr. Finley represents the Henry L. Doherty interests.

F. C. Proctor of Houston, Tex., former general counsel of the Gulf Petroleum Co.; he is now retired from active law practice.

Henry M. Bates, dean of the law school of the University of Michigan; Mr. Bates is a constitutional lawyer.

Paul M. Gregg of Los Angeles, Calif., general counsel of the Union Oil Co. of California, Los Angeles, Calif.

Clarence E. Martin of Martinsburg, W. Va., coal attorney.

John P. Gray of Coeur D'Alene, Idaho, specialist in the law relating to precious metals.

As Senator Long, chairman of the foregoing committee, has not yet decided upon subcommittees he will create out of this committee of nine but expects in the near future to submit three names to Secretary Work as representatives of the American Bar Association to join with Secretary Work's three members and those to be appointed by President Clark of the American Petroleum Institute.

Antiknock Increases in Importance

High Compression Engines and Ethyl Gasoline Demand Responsible For Renewed Interest. Vapor Phase Cracking Receiving Attention

By C. O. Willson

A widely known refinery executive recently said that the most important problem confronting the refining and marketing divisions of the oil industry was the manufacture of gasoline suitable as motor fuel for high compression engines in automobiles.

If the subjects which featured the recent sectional and national meeting of independent jobbers and the informal discussions which take place whenever small groups of refinery technologists or sales managers get together are to be considered a criterion then there can be no doubt as to the accuracy of the executive's statement.

Differences in gasolines and other motor fuels based on their performance in internal combustion engines has been a mooted question among the refining and marketing fraternity for over two years but recent developments have accentuated its importance until now it is taking precedence over all other problems in many organizations.

The two developments which are held responsible for the fact that many research organizations have been working overtime are the rapid increase in the sale of ethyl gasoline and the introduction of the high compression engine in the automobile industry. Since both these developments have paralleled each other and were apparently brought forth under a common plan they may be considered as one.

Probably every reader is familiar with the advertising campaign which has been carried on since early in the year by the Ethyl Gasoline Corporation. Certainly every competitive distributor of gasoline has been fully aware of this campaign as in most cases it has been reflected in the volume of his own sales. This advertising which has been national in scope has been supplemented by the advertising and aggressive sales campaigns of those who have been privileged to sell the ethyl gasoline.

Ethyl Sales

Relative to the sales of ethyl gasoline an investigation just conducted by representatives of The Oil and Gas Journal in all parts of the country supports in general the findings of some of the larger companies which have been interested to the extent that they have made complete surveys of gasoline marketing conditions. Sellers of ethyl gasoline have had increases in the volume of their sales in all parts of the United States.

The largest increases, however, have been at interior points. On the west and east coasts ethyl gasoline apparently has not yet become as serious a competitive factor in gasoline sales as it has in the interior areas stretching from the Appalachian to the Rocky Mountains including a greater part of the Southwest.

This has been explained in part as due to the fact that the sales campaigns in the coastal states have not been carried on as actively as they have at other points. Probably the most important reason, however, lies in the fact that the gasolines which are secured direct from crude oil by the coastal refiners in a skimming or cracking operation naturally have a high antiknock value, the characteristic which is stressed the most in the sale of ethyl gasoline. This situation is very apparent along the west coast. It has been known ever since the agitation relative to antiknock gasolines started that the naphthene base crudes of California furnished a skimming or cracking stock which was much higher in antiknock value than the paraffin base crudes of the fields east of and including the Rocky Mountain areas.

In addition to the general distribution on the west coast large quantities of this California gasoline have been moved to the east coast. Considerable quantities of the California crude oil and gas oil have also been transported to east coast refineries where they have been refined into gasolines relatively high in antiknock value. In addition certain crudes east of the Rocky Mountains including Smackover, South Oklahoma and some of the Gulf Coast crudes have been found to compare favorably with the naphthene base crudes of California in the manufacture of antiknock gasolines. Some tests recently made of the new crudes of the West Texas area indicate that they will also produce antiknock gasolines. Their attractiveness from this standpoint may offset the disadvantages of low gravity and high sulphur content which have been held against the crudes in that area since they were first discovered.

Several eastern companies have sold the gasolines obtained from these special grades of crude at premium prices in competition with ethyl gasoline. Due to the fact that the refineries are located near the coast the distribution has been largely confined to the coastal states.

In the territory stretching from Pennsylvania west through the Rocky Mountains, including part of the South and Southwest, distributors of gasoline to date have not been as successful in meeting the competition of ethyl gasoline. Independent jobbers for months have been requesting their refinery sources of supply to furnish them a gasoline which they could offer their customers in competition with the product containing tetraethyl lead, the chemical used in the manufacture of ethyl gasoline. The large integrated companies have also been busily engaged in the development of substitutes.

Fear Future

Some of the companies are not so much concerned with the present competitive situation but they fear that developments during the coming year in automobile engine design will make it imperative that they change the specifications of their gasolines. The present demand for ethyl gasoline has been created among consumers whose automobiles have the ordinary low compression engines. The rapid increase in sales shows that a large number of these automobile owners believe that they secure a better performance with the low compression engines through use of the ethyl gasoline.

But it is with the high compression engines that the sellers of ethyl gasoline expect to make their real inroads in the sale of motor fuels. It is generally believed that the campaign made by the Ethyl Gasoline Corporation during the past year was but one step in a plan which may not reach its final objective until several years in the future.

The plan first called for the universal distribution of ethylized gasoline and this has now been accomplished not only in the United States but in some foreign countries. With the distribution established the next step is the manufacture of the high-compression engine and it is this development which is causing concern among these companies which are not at this time a part of the "ethyl chain" of refiners and distributors. Many of these companies are confident that they can successfully meet the ethyl competition in the sale of gasoline for the ordinary automobile engine in general use today but they are not so confident regarding their future with a different type engine.

Some changes in the compression ratio of automobile engines have already been made. In most cases, however, the increase has not been great enough to cause any particular comment among automobile owners. The outstanding change to date has been the "Red Head" engine of the Chrysler Motor Car Corporation. The corporation has made this special high compression engine available in all models. The company has been recommending the use of ethyl gasoline as the type of motor fuel best suited to the engine.

The trend toward high compression engines will gain momentum it is predicted shortly after the first of the year when one or more of the General Motors companies is expected to offer a new type high compression engine. The General Motors Corporation is part owner of the Ethyl Gasoline Corporation and it is assumed that the widespread distribution of a motor fuel suitable for high compression engines was brought about preparatory to the manufacture of the engines on a large scale.

It is predicted by many in both the oil and automobile industries that the sale of all types of cars in the near future will be based on changes in engine design. It is pointed out in this connection that there is need of some outstanding change on which to push the sale of new cars. In the past the manufacturers have been able to make improvements in body design or chassis or add accessory equipment all of which added to the attractiveness of their cars as motor vehicles. Recently however about all many of the manufacturers have been able to offer in their new models has been a change in the color of the paint job.

The high compression engine obviously would give an excellent talking point in persuading automobile owners to replace their present cars providing it has all the qualities claimed for it. From a performance standpoint quick pick-up, more power and greater speed with all around smoother operation is claimed for the high compression engine. It is also stated that with the suitable type of motor greater mileage is obtained, an economy which will offset any increase in the per gallon cost of the motor fuel. Finally, as an additional economy, it is said that when the compression engine is manufactured on a large scale the manufacturing cost will be less than the present type motor, a saving which will be passed on the owner.

Opposing View

It should be stated at this point that there are those in the oil industry who do not expect the so-called high compression motor to supplant the present type engines unless they are perfected to the point that they can use all the grades of gasoline now available. They predict the field for the automobiles with high compression motors will be limited to those consumers who are willing to pay premiums for their gasolines and desire some special performance in their cars which they believe are not obtainable from the ordinary types.

In this connection the work of the Natural Gasoline Association of America (recently adopted new name of the Association of Natural Gasoline Manufacturers) is of interest. The research department of this organization which is headed by Dr. G. G. Brown of the University of Michigan has made some important investigations during the past year relative to the most desirable characteristics in motor fuels.

In recent talks before meetings of independent jobbers, Doctor Brown has minimized the importance of antiknock in motor fuel, taking the posi-

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CHANGES IN OIL AND AUTOMOBILE INDUSTRIES

The next important development in the automobile world is believed to be a change in engine design to permit the general use of higher compression ratios.

These engines require motor fuels of specifications not present in the bulk of the gasoline being marketed at this time. The so-called antiknock specifications are of special importance from the standpoint of satisfactory performance in the new type engines. A large demand has already been built up for special gasolines meeting these requirements.

This article is concerned with the research work now under way by refining and marketing organizations to manufacture these gasolines in anticipation of a widespread demand in the near future. The pro and con of motor fuel specifications is discussed from the viewpoint of both the oil and automobile industries.

Refining of West Texas Crude Oil

Problem Similar to Those Encountered in New Fields of the Past. Substantial Yield of Gasoline Obtainable

By Dr. C. K. Francis
Technical Editor

"Oil is oil wherever you find it," was an axiom of the petroleum industry, and quoted on many occasions for over 60 years. However, modern conditions surrounding the utilization of petroleum products have demonstrated that there are many kinds of oil. We had no classification of crude oil in the Mid-Continent until November 22, 1922, when a schedule of prices for its purchase was announced. This was based on gravity. At that time oil sold for $1.25 a barrel, although it was the practice for some refiners to pay a premium in addition, when it was possible to obtain crude oil of superior quality from a refining standpoint. The price schedule of November 22, 1922, set a price of 90 cents a barrel for all oil 28 gravity or below, and $1.80 a barrel for oil testing 39 or above. This scheme of classification recognizes differences in quality as shown by gravity which, in a general way, may be an indication of the gasoline content. The higher gravity oils usually contain more gasoline, of a fixed quality, than the lower gravity crudes. The tendency of this property is illustrated in Figure 1—

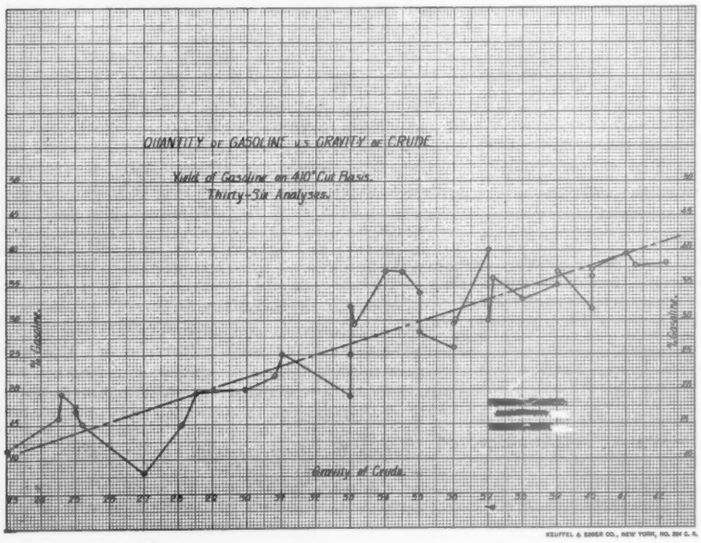

QUANTITY OF GASOLINE vs GRAVITY OF CRUDE
Yield of Gasoline on 410° Cut Basis.
Thirty-Six Analyses.
% Gasoline.
Gravity of Crude.
KEUFFEL & ESSER CO., NEW YORK, NO. 354 C. S.

Figure 1—Data for this chart were furnished by the Skelly Oil Co.

Quality of Gasoline vs. Gravity of Crude, which is based on a yield of gasoline having an endpoint not above 410 degrees Fahrenheit.

The tremendous advancement that has been made in the petroleum industry in the past 27 years has been caused by the demand for motor fuel, gasoline. The total production of crude oil in the United States for the year 1900 was 75,989,913 bbls., which has increased to over 900,000,000 for this year. The quantity of gasoline made in 1900 was so small that it was considered to be of little economic importance, but it is estimated that the gasoline manufactured in 1927 will be nearly 350,000,000 bbls., and one of the most important of all commercial products. With this ever increasing production of oil and consumption of gasoline, and other petroleum products, there has been developed an atmosphere which must eventually result in a more exact grading of the crude oil, which is to be the raw material for products of highest purity.

It is usually true that the discovery of a pool of oil is also a discovery of a new oil. The industry has been fortunate in that there have been very few large pools found which produced oil of especially poor quality, or oil containing abnormal offensive and corrosive substances. The first bad oil was found in Ohio, near Lima, April 18, 1885. The Romance of American Petroleum & Gas says: "The Lima oil was quite different from that found along the folds in the great subterranean valley lying between the Cincinnati Arch and the later folding of the Allegheny Mountains. It contained less of the ingredient known as paraffin and it was impregnated with sulphur, the Pennsylvania oil having more of the latter. The new oil had a vile odor and the gas of the Trenton rock was even more foul smelling, but the energetic oil man overlooked these faults and sought the fluid with as much ardor as in the older fields to the eastward. While refiners were spending money and exerting brains in experiments to devise a process that would eliminate the sulphur. The fields developed a production of thousands of barrels a day."

The production increased very rapidly but the refiner refused to buy the oil. The price fell to 10 cents a barrel, then finally it could not be given away. This condition generated the first serious effort to develop a market for oil as a fuel. Certainly the objectionable odor and the presence of sulphur compounds could not prevent the oil from burning and being a source of heat.

The removal of the sulphur from the Ohio crude was finally solved by Doctor Frasch. His first process provided for the distillation of the crude oil in the presence of copper oxide, which combined with the sulphur, forming copper sulphide. The still was equipped with mechanical stirrers to keep the oxide in suspension. When the larger part of the oil had passed off, additional fresh crude oil was added and the process repeated sometimes as many as five times. The residue and the copper sulphide were then pumped to a filter press, where the solid material containing copper oxide and copper sulphide, was separated from the liquid. The copper sulphide was regenerated by roasting. The sodium plumbite method for treating distillates was developed and applied to this kind of oil. Ever since the first days of the Lima oil, when a new oil is discovered which is not of especially high quality, there is someone to propose that it is good for nothing but fuel. Several examples of this may be given.

It was reported to the Oklahoma Corporation Commission in March, 1914, that the newly opened Healdton Pool, then producing 6,000 bbls. was of little value. "The oil lacks vitality and it goes to pieces very readily; meaning that the volatile ingredients are lost, leaving it rather dead, thick and sticky. There is a very perceptible sulphur odor noticeable over the field, like that where the heavy crudes are produced in Texas, Louisiana, Mexico and California, the so-called fuel oils of commerce. These superficial data also indicate that the Healdton production can easily be rated as a fuel oil in contra distinction to a refining oil, as even the lighter gravity crude appears to deteriorate very quickly."

Analyses showed this oil to contain 0.6 to 0.7 per cent total sulphur.

Because of these objections to Healdton oil, the building of pipe lines into the field was delayed. When investigations of the refining value of the oil were completed these objections were swept aside. By 1916 the field was producing 100,000 bbls. a day and the price had doubled.

Smackover, in 1922, gave the industry a so-called heavy oil, a fuel oil, which some said would never be refined. This field has produced over 200,000,000 bbls. of heavy oil, the larger part of which has been refined.

Early in 1926 oil began to be produced in the Texas Panhandle in great volume. This oil was found to contain several objectionable substances, including numerous compounds of sulphur, an excessive quantity of wax and salt, with some water. It was at once condemned as being of no value except for fuel oil. While it is true that the problems of this oil are so complicated that many refiners have not been successful in producing satisfactory products from it, others have demonstrated that it is a valuable oil from which superior products may be obtained.

The great production of a high grade oil in the Seminole district of Oklahoma has been more than enough to satisfy all demands of the market. Yet we have in the making a district in West Texas, now producing over 200,000 bbls. a day, excluding the Panhandle, which promises to surpass in volume any field previously developed in the United States. The character of this crude has convinced some that it has no refining value. In answer to this suggestion we may find a study of the properties of some of the oil from this new district, of interest.

The analyses in this table have been collected from several different sources and are therefore not stated in uniform terms. As is frequently the case, the quantity of sulphur may be found to be more in the first fresh oil than that produced after several months. The quantity of gasoline which these crudes may yield by modern skimming, appears to be between 25 and 30 per cent.

Another set of samples were tested for the purpose of determining the yields. These are reported in the table below.

ANALYSES AND YIELDS WEST TEXAS CRUDE OILS

County—	Winkler		Upton	Jones	Pecos		Crane and Upton	Big Lake
Gravity	30.1	30.2	25.0	37.6	30.1	30.0	29.4	38.2
Sulphur	0.87	1.53	....	0.23	2.4	1.56	1.0	0.34
Cold test	....	60	0	25	15	0	....	....
B.s. and water	0.8	0.8	0.8	0.4	0.2	0.1	0.3	0.5
Color	Dark Green	Black	Dark	Black	Dark Green	Black	Black	Green
Hydrogen sulphide content	....	....	High	....	High	....	High	....
Viscosity Saybolt Universal @ 70° F.	....	80	....	....	....	94	....	....
Viscosity Saybolt Universal @ 100°F.	....	59	....	....	....	57	....	....
Yields Per Cent—								
Gasoline 437 E. P.	29.0	25.4	15.0	36.0	29.0	26.4	23.2	31.0
Kerosene 41 Gr.	6.2	8.8	5.5	9.0	6.0	5.3	7.0	9.0
Gas Oil 32 Gr.	28.0	28.0	25.0	30.0	28.5	26.0	28.0	37.5
Fuel Oil 18/26	33.8	35.3	52.5	22.0	34.0	39.3	39.0	19.0
Loss	3.0	2.5	2.0	3.0	2.5	3.0	2.8	3.5

None of these oils, with the exception of the Big Lake sample appears suitable for the manufacture of cylinder stock. The cylinder stock made from this oil had a low pour point, 0.5 degrees Fahrenheit, the color was olive green. The gravity and distillation test of some of the gasolines produced, indicated that large quantities of natural gasoline would be required to bring them to a good motor fuel condition and to meet standard market specifications.

Reducing the data to average there is an indicated yield as follows: Gasoline, 26.2 per cent; kerosene, 6.8 per cent; gas oil, 27.6 per cent; and fuel oil, 36.5 per cent.

When reference is made to the chart in which gasoline yields and gravity are compared, it will be seen that a yield of 26.2 per cent gasoline is apparently somewhat better than normal. The quantities of gas oil and fuel oil are high.

(Continued on Page 147)

ANALYSES OF WEST TEXAS CRUDE OILS

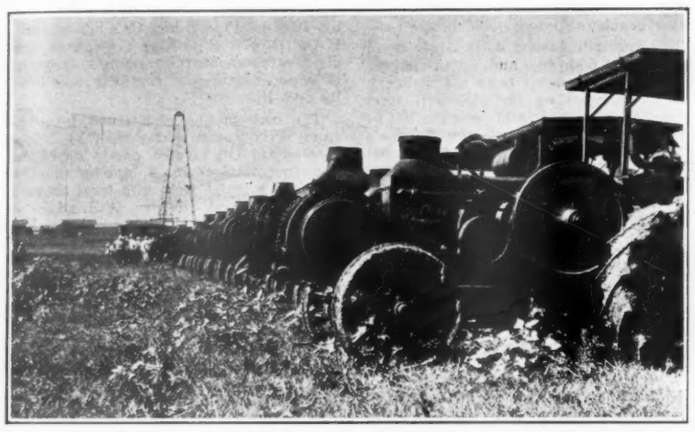
Sample From—	Gravity A.P.I.	Sulphur % Wgt.	Atmospheric Distillation: Gasoline to 392	Gravity	Kerosene to 537	Gravity	Vacuum Distillation: Gas Oil to 437	Gravity	Residuum %	Residuum Gravity
Crane County, Church-Fields	31.6	2.56	29.3%	55.7	16.3%	40.0	6.6%	32.3	....	....
Crane County, Gulf-McElroy	32 6	2.23	29 3	59.8	18.0	40.4	8.6	32.5	....	....
Crane County, The Texas Company 1-F.	31.0	1 00	....	....	....	....	....	....	....	....
Upton County, Hughes	28 3	1 90	25.1	55.0	3.0	42.0	6.0	38.9	65.3	19.5
Upton County, Estep	32 2	1 95	26 2	57 1	1 6	42.1	7.4	39.0	64.2	22.1
Upton County, Bowen	30 2	1 83	22.1	57.3	3.3	42.1	6.6	39.0	67.4	21.6
Pecos County, Yates	28.9	2 27	21.0	54.7	17.4	38.8	8.7	29.5	....	....
Winkler County, Discovery	28 8	2.07	22 5	....	....	....	....	....	....	....
Winkler County, Discovery	27.3	1 85	19.6	52.6	18.6	38.4	10.4	29.0	....	....
Winkler County, Gulf's No. 1	29 1	1 49	22 4	....	....	....	....	....	....	....
Big Lake Field	37.5	0 40	34.0	59.7	14 0	38.8	18.75	35.9	....	....
Crockett County, World Pool	29.1	0.85	17.7	53.4	16.9	38.6	10.1	34.0	....	....
(Roxana well)	31 9	0.58	21.2	55.2	....	....	13.4	39.0	64.8	24.1
Ector County, Cosden 1-A	35.2	1 21	23.3	56 3	17 3	41.3	11 0	33.6	....	....
Garza County	37 3	Trace	35.3	57.9	16.6	40.1	8.3	....	....	....
Mitchell County, Westbrook	25.7	2 68	27.3	55.5	13.3	35.5	9.0	28.0	....	....
Howard County, Chalk	31 8	0 88	25.1	58.0	16.0	40.7	10.1	34.5	....	....
Chalk	35.1	1.10	23.3	57.1	19.0	41.8	8.7	35.3	....	....
Fred Hyer	31.3	....	22.3	57.7	17.33	40.0	11.66	29.5	....	....
Owen Sloan	33.2	....	23 66	56.5	16.34	41.5	12.66	33.4	....	....

Thing of Might Is Oil Field Tractor

Regarded With Incredulity and Distrust Decade Ago, It Is Turned to Now to Do Hard Jobs—and It Does Them

By Thomas F. Smiley

Nothing to brag of in point of beauty is the tractor. You don't hear its friends talking about its graceful lines or its harmonious blending of colors. But when it comes to performance the tractor shines—that is to say, it would shine if there were any place on its not especially prepossessing anatomy capable of shining. What is meant is that when there is a downright hard job to be done—a colossal, cantankerous, brain-turning kind of job that's shunned by everybody and everything else—the tractor lumbers up in an unconcerned sort of way, emits a well-let'e-go snort or two, swings the job up on its back and walks off with it.



Lined up for 50-foot "dash" on Phillips Petroleum Co. lease, Burbank Field.

Less than 10 years ago the tractor was virtually unknown in the oil fields. It had performed miracles in agriculture, in plowing, preparing the ground for crops, seeding, harvesting grain crops and doing scores of other kinds of work, such as threshing and hauling. In the grain country of the Northwest farmers had come to depend on the tractor as completely and trustfully as an ordinary man depends upon his suspenders to perform their function faithfully and well, with loss and disaster as certain to follow failure in one case as in the other.

But oil men shook their heads. Field superintendents argued that they had to have teams of horses about the lease anyway, so even if the tractor could pull a string of tubing, what was the use of putting money into a machine that wasn't needed since the horses were right there?

One field superintendent who had particularly strong views on the subject said: "If one of my foremen came to me and said we ought to get a tractor, I'd fire him, because I'd know he didn't understand his job." That same superintendent capitulated later, became a warm advocate of the tractor in oil field work and now has a fleet of these machines working under his supervision.

Ordered Off Lease

Commenting on the days when oil men viewed the tractor with doubt and suspicion, Fred E. Cooper of Tulsa, Okla., for many years interested in the introduction of tractors in the oil fields, said: "I recall one instance in which a superintendent actually ordered me off his lease. He was so danged bitter against tractors that he saw red if you even mentioned them to him. That man today is using tractors right along and he laughs at his former opposition."

The range of oil field work for which the tractor is adapted is almost limitless. It will pull rods, tubing and casing; bail and run tubing, move buildings and tanks, skid derricks, snake boilers, clean out wells and do general maintenance work on an oil lease. It will perform the work of several teams in hauling equipment about a lease. A good tractor, according to oil men who have tried these machines, is one of the most practical pieces of machinery that can be put on a new lease, because of its usefulness in moving flow tanks, portable and semiportable rigs, pipe, etc. A drilling rig that required 10 or 12 teams a whole day to move it from one location to another on the same lease can be moved in an hour or two by a tractor. It can be seen here how the tractor pays for itself, for the cost of such a moving job as that just mentioned would be from $30 to $50 if done with horses, while $10 probably would cover the cost if done by tractor.

The value of the tractor in oil field work—and its versatility—were never better demonstrated perhaps than in the Seminole Field in 1926, when lease owners were trying frantically to get drilling equipment to locations and to begin operations. Throughout the summer and fall the work proceeded with fair speed and orderliness, conditions considered; but when winter set in and roads were converted into great mudholes, the problem of transportation became desperate. It is of record that at least one company in the maddening scramble and congestion that resulted from the impassability of highways paid $5 a joint to have pipe transported from the railroad siding in Seminole City to its lease about 3 miles distant. So deep and so like quicksand were some of the mires that mules hauling drilling equipment sank in them and drowned.

Tractor Saved Day

In this discouraging situation came the tractor, in many cases saving the day. In one spot near Roscoe was a particularly atrocious stretch of road about 300 yards long where it was found utterly impossible to get heavy loads through by team or truck. A tractor was placed at one end of this stretch of quagmire and with a winch line one load of equipment after another was conveyed across in safety and triumph. Here not only the equipment, but the wagon or truck containing it, was hauled across the mire.

In one case 500 sacks of cement became stuck in the miry road and withstood all efforts to dislodge them till a tractor arrived on the scene. Eleven or 12 teams, even 16, would be used in hauling a boiler. As soon as the tractor had shown what it could do the transportation job was handed over to it where impassable roads had brought operations almost to a standstill.

Interesting records of tractor accomplishment have been kept by some of the large oil companies which in the past few years have adopted this device for regular use in their field work. The Devonian Oil Co., for instance, on its lease near Beggs, Okla., pulled and reran 2,685 feet of rods and tubing in 3 hours and 45 minutes. In other days this job probably would have required from one and a half to two and a half days, depending upon which of the old methods was employed.

T. J. Hamilton, production superintendent for the Phillips-Skelly properties in the Burbank district of Oklahoma and an ardent believer in the tractor for oil field work, tells of one of his experiences. "Tom" had been having a slow and arduous job pulling 3,000 feet of $5\frac{3}{16}$-inch casing. As an experiment he tried a tractor, discovering to his surprise that the tractor not only would pull the casing, but that it had several horsepower more than was needed. He pulled 10 joints with a seven-line block he had been using and then doubled over to a five-line block with ample power to do the work. "We pulled 125 joints of $5\frac{3}{16}$-inch, 17-pound casing in seven hours with a tractor winch," said Hamilton.

Notwithstanding the widening use of the tractor in oil field work and the increasing confidence in its power to perform difficult tasks assigned to it, tractor experts declare that many oil companies now using tractors do not get one-half the possible efficiency from them. This, they say, is because the tractor, while one of the most important pieces of machinery on an oil lease, is placed in the hands of inexperienced men and men in charge of it are changed from day to day.

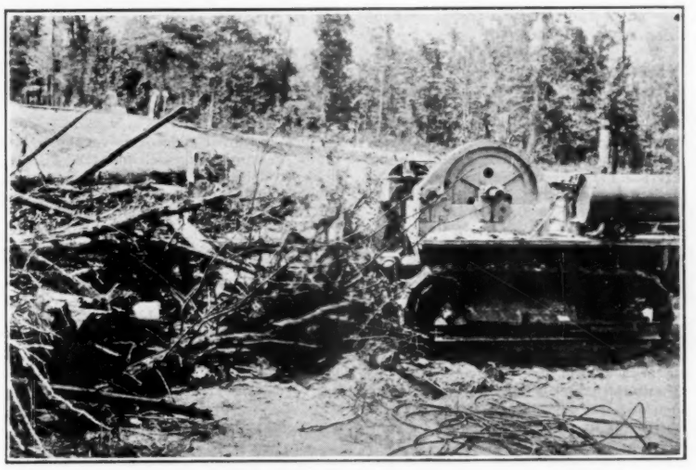
Green Men in Charge

Superintendents who would not think of putting a green man in charge of a team of horses or of allowing an inexperienced driller on the derrick floor will give a tractor over to a man who knows virtually nothing about the machine except how to start and stop it. They actually will risk the very life of a well, the drilling of which has cost $5,000 to $50,000, by letting a green man operate a tractor in a job of pulling and running rods and tubing, taking a chance on the novice dropping tools in the well and thus providing a fishing problem that may result in a lost hole.

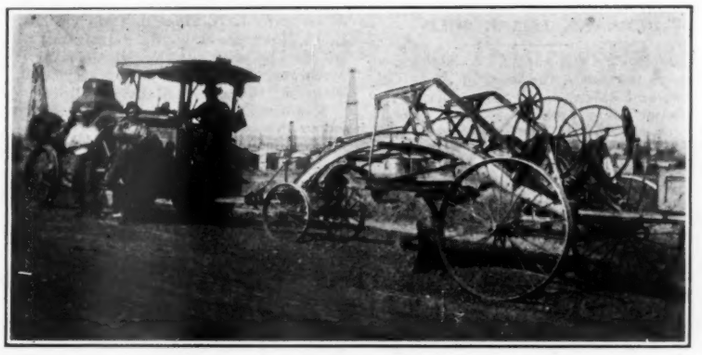
When field superintendents and foremen realize that intelligence and care must be exercised in the operation of tractors, precisely as intelligence and care are imperative in the driller and the pumper, then, it is asserted, the owners of tractors will get the full possible returns from them—and not until then. It is urged that tractor operation should be regarded as a skilled trade, just like drilling, pumping and shooting of wells.

Among large oil companies which real-

(Continued on Page 147)



Using tractor to clear away masses of rubbish left by Atchafalya River flood at Melville, La.



Tractor pulling grader in making roads on Comar Oil Co. lease, Tonkawa Field.

Former Presidents Selected by A. P. I. For Oil Committee

WASHINGTON, D. C., Nov. 15.—The three representatives of the oil industry, who will serve on a committee of nine suggested by Secretary Work, chairman of the Federal Oil Conservation Board, to consider methods of meeting the problems affecting the petroleum industry were announced today at the Interior Department.

The three, selected by the American Petroleum Institute, are Thomas A. O'Donnell, chairman of the board, California Petroleum Corp.; J. Edgar Pew, vice president of the Sun Oil Co., and W. S. Farish, president of the Humble Oil & Refining Co. Each is a former president of the institute.

Five Years Given in Which to Drill Next Lot of Osage Leases

An important change in drilling requirements is to be inaugurated in the leases issued as a result of the next sale of Osage tracts. Heretofore the leases stipulated the drilling of a well within one year from the date of the approval of the lease, but the advertisement for the sale to be held at Pawhuska, Okla., December 12, notifies bidders that the new leases will contain a five-year drilling clause similar to that contained in commercial leases. The statement in part is as follows:

"The provisions of present regulations requiring the drilling of a well within 12 months from date of approval of lease are hereby suspended as to this particular sale and lessees acquiring leases may hold same for the full five-year period without drilling upon payment of rental to the superintendent for the lessor at the rate of $1 per acre per annum or a proportionate part thereof for each three months period the lease is held by the lessee and a well not drilled, such rental beginning 12 months from date of approval of lease, provided that the superintendent in his discretion may direct the drilling of any undrilled lease if in his opinion the interests of the Osage Tribe warrant."

GASOLINE TAXES OVER $200,000,000 A YEAR

WASHINGTON, D. C., Nov. 14.—The gasoline taxes collected in the United States during the first six months of 1927 have been at the rate of over $200,000,000 annually, according to a statement issued by the Bureau of Public Roads, Department of Agriculture.

During the first six months of this year these gasoline taxes totaled $101,250,841. This represented an increase of 19.2 per cent over the total taxes for the same period of the previous year.

A gasoline tax was imposed in all but four states of the Union during the first six months and two of these states have since enacted a law so that at the present time only New York and Massachusetts are without taxes on gasoline.

The revenue collected on gasoline during six months indicates consumption amounting to 4,919,000,000 gallons or 11.4 per cent in excess of the first six months of 1926.

California led all the states in the amount of gasoline tax collected in this six months, the total being $9,035,934. The rate of tax on gasoline on June 30 of this year ranged in the several states from 2 to 5 cents per gallon and averaged 2.55 cents.

This tax was used very largely for financing highway improvement. State highway funds received $69,616,008 for highway purposes during the first half of this year. County and local roads fund received $22,843,566, as payment on road bonds amounting to $4,598,751, and the remainder was used to defray collection costs and for miscellaneous purposes.

QUESTIONS ANSWERED

The department devoted to "Field Problems and Their Solution" will be found on page 72 of this issue. The inauguration of this service for field men and all those engaged in the drilling, producing and transporting branches of the petroleum industry has met with instant and great favor. Leading engineers are co-operating with The Oil and Gas Journal in answering questions relating to problems confronting those engaged in these different branches of the oil business and this page is a forum through which difficulties encountered in the field may be solved. Giving wide publicity to these problems and their solutions will aid all engaged in the business.

YATES POOL WELL GAUGES 2,059 BBLS. IN 45 MINUTES

The Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s No. 2 Yates, which came in Saturday, starting off at 800 bbls. an hour, was given a 45-minute proration gauge on Monday of this week and flowed 2,059 bbls. in 45 minutes, or at the rate of 65,880 bbls. a day. The oil was run through three 4-inch lines. The gauge was made to determine the Mid-Kansas and Continental companies' share in the proration of the field, which has been kept down to 40,000 bbls. a day of which the two companies named are entitled to run about 27,000 bbls. No. 2-C Yates, if its brief gauge is a criterion of what the well can do in 24 hours, is one of the largest producers of oil, high grade or low grade, that has ever been drilled in the United States. The sand was topped at 955 feet and drilled in to 993 feet.

MINING CONGRESS WILL MEET WITH GOVERNMENT

WASHINGTON, D. C., Nov. 14.—Conferences with officials of Government bureaus handling mining matters will be held by delegates to the annual convention of the American Mining Congress at the Mayflower Hotel, Washington, D. C., December 1, 2 and 3. This innovation in the convention program is designed to enable mining men to obtain a clearer view of the work of the Government along mining lines. The conference will be known as "hours" and will be held by the Bureau of Mines, Geological Survey and Internal Revenue Bureau. They will be scheduled as special features of the daily sessions.

Nationally known speakers will appear on the convention program. Former Representative P. P. Campbell of Kansas will discuss "Federal Control—the Bugaboo of Industry;" and W. J. Donovan, assistant to the Attorney General, will speak on "Is Modification of the Sherman Anti-Trust Law in the Public Interest?" Speaker Nicholas Longworth of the National House of Representatives will make the principal address at the banquet December 2.

BURBANK LEASE SOLD

The Prairie Oil & Gas Co. is reported to have purchased the lease of A. G. Oliphant and others on the east side of the Burbank Field, Oklahoma. The lease is the one upon which the discovery well of the east trend is located, and it is described as the northeast quarter of Section 20-27-6. There is one well upon the property making 3,800 bbls. of oil daily by natural flow. The well is two weeks old, and started flowing at the rate of 155 bbls. per hour from the top of the regular Burbank sand. Deeper drilling increased the flow to 4,000 bbls. daily, and the past week it dropped to 3,800 bbls.

While no official announcement was made, the price paid for the lease is said to have been $1,100,000.

DUTCH SHELL INTERESTS PLAN PIPE LINE FROM WEST TEXAS TO OKLAHOMA

Another outlet for West Texas crude is seen in the report that the Dutch Shell interests operating as the Roxana Petroleum Corp. in the Mid-Continent Field, will build a 10-inch welded line from the Yates and Winkler County pools of West Texas to connect with the present system of the Ozark Pipe Line Co. at Cushing, Okla. From Cushing the present line will be used to transport the oil to the company's refineries at St. Louis and East Chicago.

Such a line would have an important bearing upon the West Texas producing situation and would also indicate that the Roxana believes it will have no trouble in refining the West Texas crude which is said to present some annoying problems of manufacture.

The crude from the Texas fields will enter the lines and be mixed with oils of the higher gravities, and, in this manner, the inferior character will be improved by contact with the better oils. The Roxana has followed this plan with the oil from its properties in Healdton, Okla. The Healdton oil is of low gravity, and it has been mixed successfully with higher gravity Oklahoma and Kansas oil.

The line will have a daily capacity of 40,000 or 45,000 bbls. and, it is said, the pipe has been ordered from a Pittsburgh mill. Shipments on the pipe will start before December 1 and work will be rushed in order to provide the Roxana's recently completed refinery at Chicago with an abundant supply of crude.

Transcontinental Line

NEW YORK, Nov. 12.—While the Transcontinental Oil Co. may go through with its program of constructing a trunk pipe line from the Yates Pool in Pecos County, West Texas, to the Houston ship channel, it is understood that actual steps will not be taken pending negotiations with other carriers for the handling of Transcontinental's share of the Yates Pool output.

Transcontinental Oil Co.'s share of the production from the Yates lease, which it owns on a 50-50 basis with the Mid-Kansas Oil & Gas Co., subsidiary of the Ohio Oil Co., is estimated to amount to around 50,000 bbls. daily. Transcontinental Oil Co. could make use of this production immediately, but is unable to market it because of lack of transportation facilities.

It is believed that negotiations are under way between the Transcontinental and Illinois Pipe Line Co. as a result of which the latter company may construct sufficient trunk line capacity to the Gulf Coast to take care of the production of both the Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co. in the Yates Pool. This would mean the construction of at least two trunk lines by Illinois Pipe Line Co. immediately. If the Illinois Pipe Line Co. cannot handle Transcontinental's output, however, it is understood that company will build its own line.

The construction of a trunk pipe line from West Texas to the Gulf by Transcontinental Oil is also partly dependent upon negotiations for financing the program, now under way with local bankers, it is understood. Henry D. Lindsley & Co. are mentioned as taking part in these negotiations.

M. J. GROGAN CHOSEN PRESIDENT OF LOUISIANA-ARKANSAS DIVISION

SHREVEPORT, La., Nov. 12.—M. J. Grogan, vice president of the Louisiana Oil Refining Corp., was elected president of the Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association at the annual meeting of the directors here. He succeeds George O. Baird, president for the past two years. Time and place for the annual dinner will be fixed at a later meeting of the executive committee.

Other divisional officers and committee appointments, most of them re-elected, are: C. R. Minor, Gulf Refining Co.; J. R. Crawford, Crawford & Sebastian; R. O. Roy and N. C. McGowen, vice presidents the Palmer Corp., vice presidents; Ben Johnson, president Commercial National Bank, treasurer, and Joseph B. Elam, secretary.

Legal committee: J. S. Atkinson, Gulf Refining Co., chairman; Yandell Boatner, Roy Benoit, Fred Fuller, Tinsley Gilmer, T. M. Milling, Standard Oil Co.; W. M. Phillips, John H. Tucker and H. C. Walker, Jr., of Shreveport; T. J. Gaughan, Camden, Ark., and J. K. Mahoney and W. H. Rector of El Dorado, Ark.

Finance: C. R. Minor, chairman; M. J. Grogan, J. S. Hasson, Ohio Oil Co.; E. D. Holcomb, Magnolia Petroleum Co.; A. M. McCorkle, Dixie Oil Co.; N. C. McGowen, William Sebastian and W. L. Stratton, Standard Oil Co.

Members general executive committee from this division: J. R. Crawford, George Belchic, Northwest Louisiana Gas Co.; N. C. McGowen and A. M. McCorkle.

Divisional executive committee: R. E. Allison, Ben Johnson, J. B. Atkins, Jr., Shreveport Producing & Refining Co.; C. R. Minor, George O. Baird, J. R. Munce, Arkansas Natural Gas Co.; Sam K. Baird, A. M. McCorkle, George Belchic, N. C. McGowen, Clyde M. Bennett, Louisiana Oil Refining Corp.; F. Ray McGrew, Standard Pipe Line Co.; F. W. Burford, Crystal Oil Refining Corp., W. C. O'Ferrell, Standard Oil Co., El Dorado, Ark.; W. C. Coolidge, Atlantic Oil Producing Co.; H. H. Parks, J. R. Crawford, J. R. Parten, Woodley Petroleum Co.; Walter George, M. O. Rife, Gulf Refining Co., B. H. Gray, R. O. Roy, M. J. Grogan, William Sebastian, A. S. Hardin, Southern Crude Oil Purchasing Co.; John E. Shatford, Ouachita Valley Refining Co., El Dorado; D. B. Harris, G. R. Stevens, J. S. Hasson, W. L. Stratton, E. D. Holcomb, A. H. Tarver.

The perennial complaint laid against the industry that salt water from the fields is killing all the fish having bobbed up again, this time in LaSalle Parish where prosecution and a jail term is threatened against certain individuals in the industry, it was decided to invite Percy Viosca of the conservation department here for another conference and

(Continued on Page 151)

FRANK PHILLIPS TALKS TO FRENCH COMMITTEE

Frank Phillips, president of the Phillips Petroleum Co., addressed the petroleum committee of the French Chamber of Deputies last week on invitation of the committee.

"Since my arrival," Mr. Phillips said, "I have been informed that you have two principal objects: First, the accumulation in France with all reasonable speed, of about 25,000,000 bbls. of crude oil, which are deemed essential for your national security; second, the construction and operation in France of two or three refineries, thus giving employment to French labor and benefit to France by the wealth created by this activity."

Mr. Phillips informed the committee this enterprise would require a large capital investment, and that if "the committee should desire to consider and develop some co-operative arrangement between the French government and the Phillips Petroleum Co., which would be mutually advantageous, his company would welcome an opportunity to engage in a discussion looking to that end."

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THE INSTITUTE AND CONGRESS

On the same day the American Petroleum Institute opens its eighth annual meeting at Chicago the next session of Congress will begin at Washington, the first Monday in December. It will be an opportune occasion for the industry, through the Institute, to place its position on legislative regulation of petroleum before the national legislature.

That some such statement will be required before the congressional session is far advanced is indicated by the insistence of Chairman Work of the Federal Oil Conservation Board that regulatory legislation be drafted.

The report of the Federal Trade Commission on its gasoline inquiry is expected to be ready for Congress and, no matter what it may be, it is certain to be seized as a basis for congressional attacks on the oil industry.

Senator Borah, regarded as a leader of the so-called insurgent group, has already intimated his active interest in oil conservation in his speech published in The Oil and Gas Journal of July 7 and since widely commented upon.

President Coolidge is reported holding an open mind but awaiting developments.

Millions of readers are being told by chain newspapers that "today's methods of oil production represent a wicked and indefensible waste of the nation's most precious possession" and that "it is ridiculous to assert that the Federal Government has no power or excuse to stop the present wasteful methods of producing oil in the United States."

Capital has been made out of a recently published report that the president of the American Petroleum Institute had failed to appoint three representatives to serve on the committee of nine suggested by Secretary Work to draft oil legislation, three members to be named by the Minerals Section of the American Bar Association, three by the Institute and three by the Government. Announcement has been made by the Interior Department of the appointment of three members of the American Petroleum Institute to serve on the committee suggested by Secretary Work.

The chairman of the Minerals Section of the Bar Association has just appointed a committee of nine members to consider the general subject of conservation of mineral resources from which it is expected three will be selected to serve on Chairman Work's committee.

The cumulative effect of all this discussion and agitation is certain to re-echo when Congress meets, especially on the eve of a presidential campaign when nothing that can be made into campaign material is overlooked. Attacks on the oil business have been used so often as bait for votes that the opportunity will not be neglected.

The American Petroleum Institute is aware of the situation as shown by the program for the Chicago meeting which provides for the discussion of the general topic of regulation, federal, state and municipal. The best legal talent of the industry should be represented in that discussion with the purpose of arriving at a definite statement of the industry's attitude on the entire subject, which can be laid before the Federal Oil Board and thus before Congress and the country.

It is true that a general statement on the constitutional and legal aspects of proposed oil regulation legislation was made before the board a year ago by former Justice Charles Evans Hughes representing the Institute. The criticism has been made outside the industry that this was a negative pronouncement, that it argued what the Government or the states could not do in the way of regulation, but that the industry has yet to state what may or ought to be done to curb the overproduction situation.

The answer to this, of course, is that the industry has been held back by the uncertainty of whether the co-operative action it would have to take to regulate production would not be construed as a violation of the Sherman acts. It has been suggested that the only legislation needed is an amendment of the antitrust act removing that doubt which the Federal Oil Board itself has said "should be removed by appropriate legislation."

Meanwhile it can be pointed out that, after conference with the Federal Oil Board and notice to the Department of Justice, producers in the Seminole pools put into effect an experimental plan for regulating output and by this means demonstrated the ability of the industry to deal with the problem if allowed to do so.

Assurance that operating companies would not be penalized for getting together to conserve oil in times of flush production is all that is needed. Oil men are good enough business men to know that overproduction, besides being contrary to conservation, is suicidal for the industry itself, resulting in general depression of all its markets. No federal or state enactments are necessary to compel producers to keep production from exceeding demand. The keenly competitive conditions in the business are a guarantee that production will be kept up to the market.

The record of what the industry has been able to accomplish since the Washington and New York conferences last May, in the face of general doubt about the antitrust law and the inertia among operators themselves due to the traditional belief that it would be impossible to get all interests to work together, happily disproved in Seminole, is a sufficient answer to the talk of need of government regulation.

President Coolidge in his letter creating the oil board said: "The industry itself might be permitted to determine its own future." Despite what were deemed insuperable obstacles the industry has shown that it can solve the conservation problem.

The Institute at its Chicago meeting will be able to emphasize this fact as an answer to all agitation for outside regulation besides showing the impracticability and indeed impossibility of trying to regulate production by federal or state authority.

In view of the meeting taking place simultaneously with the opening of Congress there should be an unmistakable demonstration by the industry's attendance at Chicago that it is prepared to state its case clearly and forcibly. No more important session of the Institute has ever been held because of the possibilities of hostile or misguided action in Congress and the urgent necessity for prompt counter action.

Oil men should make it a point to rally at Chicago, December 5. The effectiveness of the Institute's action can be materially strengthened before Congress and the country by the size and representative character of the meeting which voices the mind of the industry on this all-important subject of regulation.

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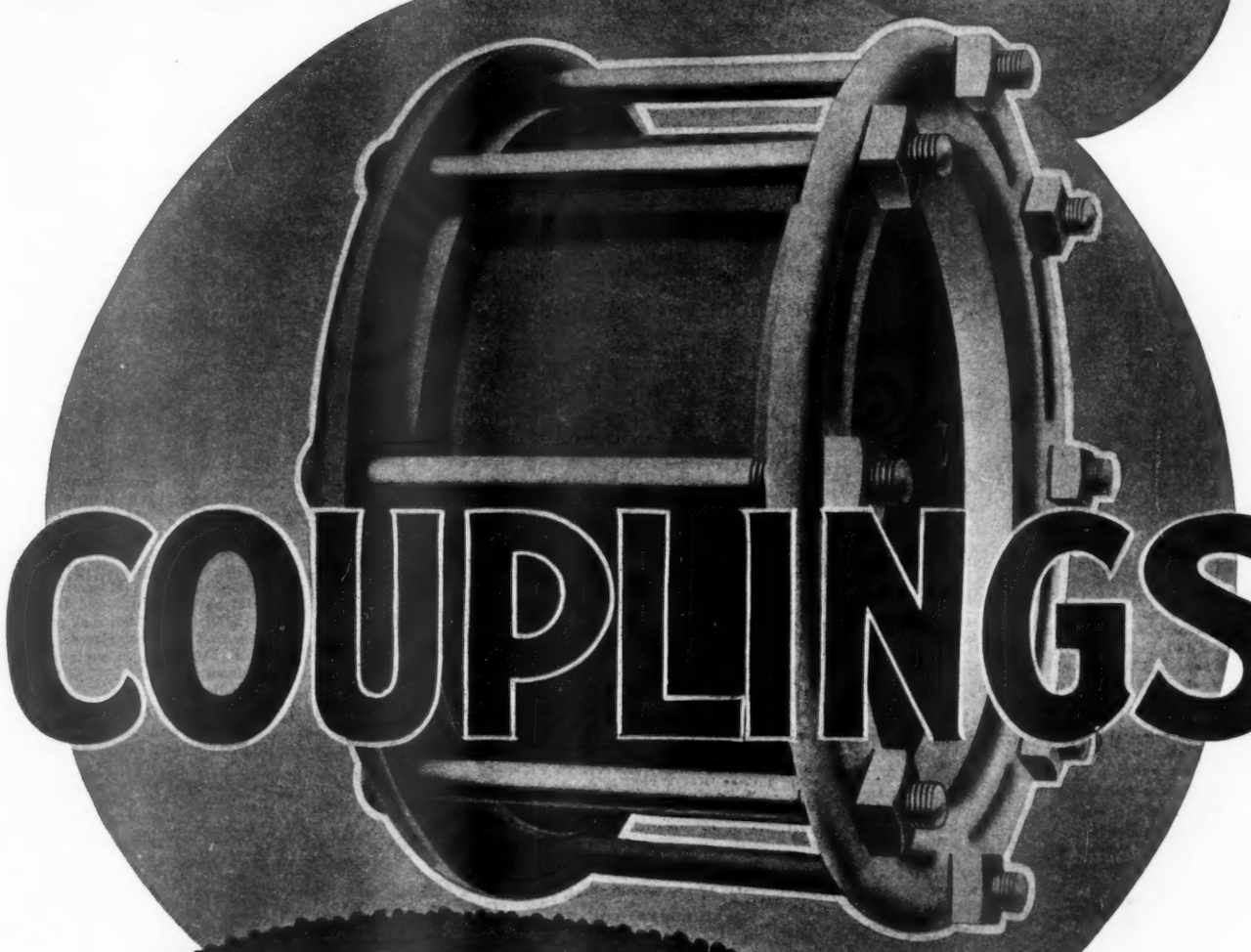

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DOMINATE

Decline in Every Panhandle County

Total of Wells Now 1,387 With Average Output of 60.3 Bbls. Disappointments in Deeper Drilling

By Staff Correspondent

AMARILLO, Tex., Nov. 14.—Daily average estimated production in the Texas Panhandle dropped 2,305 bbls. during the past week although three new producing wells were on the list. The total number of wells is now 1,387, and the average output per well last week amounted to 60.3 bbls.

Following is a table showing the number of wells and production by counties:

County	Wells	Bbls.
Carson	161	7,485
Gray	172	14,340
Hutchinson	1,011	60,690
Moore	3	5
Potter	1	30
Wheeler	39	1,130
Totals	1,387	83,680

Every county in the district participated in the decline. Even Gray County, which has been sustaining the other areas for the past few weeks, slumped 1,410 bbls. due to the fact that no new wells were brought in south of Pampa in the Bowers area which is one of the few bright spots in the entire district at present. Hutchinson County kept on its downward trend with another drop of 635 bbls., Carson County declined 160 bbls., Moore County 55 bbls., and Wheeler County 45 bbls.

There was hardly a single field development of general interest throughout the Panhandle during the past week. Camel Oil Co.'s No. 1 Harrah in Section 163, Block 3, Gray County, about 4 miles west of Pampa, drilled into salt water at 3,340 feet and will be plugged back for a shot in the upper pay horizons which it encountered on the way down. This well flowed 100 bbls. daily a couple of weeks ago from lime pay at 3,121-23 feet, with slight increases at 3,126 and 3,185 feet. It had 8,000,000 feet of gas at 3,141-65 feet and was flowing 60 bbls. daily last week while drilling below 3,265 feet. It is possible that a shot will make a good producer out of this well.

Deeper Drilling Failures

Deeper drilling does not seem to have the magic results in the Panhandle which were anticipated a few months ago, although admittedly the deeper horizons have not been given much of a test yet. Several wells, however, have gone to considerable depths and to date have found nothing of consequence below sea level.

In Gray County, for instance, several wells have been, and are being drilled rather deep. Empire Gas & Fuel Co.'s No. 1 Meers in Section 107, Block 3, about a mile west of the Pampa Pool, is drilling below 3,263 feet and, as mentioned, Camel Oil Co.'s No. 1 Harrah in Section 163 of the same block struck sulphur water at 3,340 feet. Majestic Oil Co.'s No. 6 Bowers has total depth of 3,410 feet and is straightening at 3,400 feet. Operators Oil Co.'s No. 2 J. B. Bowers had a show of oil at 3,313 feet but is drilling hard granite wash at 3,400 feet. C. B. Shafer's No. 1 Cole is shut down for orders at 3,313 feet, Young and others' No. 1 Holmes is also shut down at 3,352 feet, while The Texas Company's No. 1 W. Brown is to be plugged back from a total depth of 3,630 feet. Cole Oil & Gas Co.'s No. 1 J. E. Williams in Section 17, Block 1, A. C. H. & B. Survey, has been shut down at 3,850 feet for some time and will probably be abandoned at that depth.

In the heart of the Hutchinson County Field, Phillips Petroleum Co.'s No. 1 J. A. Whittenburg-Elra has been shut down at 4,445 feet for several weeks and will remain in that condition until spring. The Texas Company's No. 1 E. Cockrell is also plugging to abandon at 4,512 feet.

Hartley County Abandonment

In Hartley County, Deep Rock Oil Co. is preparing to plug and abandon its No. 1 Lyman & Balfour at total depth of 4,038 feet. This well created several flurries of excitement with small shows and looked promising for a time. In Oldham County, Prairie Oil & Gas Co.'s No. 1 Landergin is still cleaning out at 4,895 feet and has had no further encouragement after passing up the small showing encountered several weeks ago. In Armstrong County, Meadows and others' No. 1 E. D. Harral is shut down at 4,700 feet and in Donley County the A. T. Drilling Co.'s No. 1 F. Harrington has a total depth of 3,498 feet and is underreaming. In all probability, little further deep testing can be looked for before next summer.

New Locations

Seven new locations were made this week as follows:

In Hutchinson County, R. J. W. Oil Co.'s No. 2 E. Cockrell is 230 feet from the north and 330 feet from the west lines of S½ SE, Section 3, Block B-3, D. & S. E. Survey in the Cockrell Pool vicinity. Navajo Oil Co.'s No. 2 E. Cockrell-Dickson is 225 feet from the south and 330 feet from the west lines of N half SE, same section.

In Wheeler County, Vaughan and others' No. 1 M. Ackley is 660 feet each way out of the NW cor. W half SW, Section 20, Block 24, H. & G. N. Survey. Pete Woodley's No. 1 J. Boyle is 660 feet each way out of the SW cor. of W half Section 55, Block 13, H. & G. N. Survey, and a rig is being built for it.

In Gray County, Spartan Oil Co.'s No. 1 J. Hopkins is in the NE cor. W half NE Section 85, Block B-2, H. & G. N. Survey. Rig is on the ground. Sun Oil Co.'s No. 1 W. Jackson is NE cor. Section 94, Block B-2, H. & G. N. Survey. Gardner and others' No. 1 G. A. Saunders is in the SW cor. SW, Section 13, Block A-6, H. & G. N. Survey.

WILDCAT OPERATIONS IN PANHANDLE

Week Ending November 12, 1927

Company, Well, Farm, Name, Section and Block—	Remarks—
ARMSTRONG COUNTY	
Meadows et al's No. 1 E. D. Harrel, C Sec. 100, Blk. A-6, A. & G. Sur.	900 ft. wtr., 4,605 ft; S.D., 4,700 ft.
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and temp. abd., 298 ft.
BAILEY COUNTY	
Gibson Oil Co. et al's No. 1 Webb Miller, NE cor. Sec. 15, League 186, Swisher County school land	Rig.
Humble O. & R. Co.'s No. 1 W. H. Fuqua, C E ½, Sec. 117, Blk. A, Melvin, Blum & Blum Sur.	Drlg., 1,640 ft.
BRISCOE COUNTY	
C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B. S. & F. Sur.	S.D., 1,620 ft.
CARSON COUNTY	
Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y	S.D., 2,110 ft.
Empire G. & F. Co.'s No. 5 Burnett est., C NE, Sec. 63, Blk. 5, I. & G. N. Sur.	Drlg., 2,325 ft., 26,000,000 ft. gas at 2,600 ft.
Empire G. & F. Co.'s No. 6 Burnett est., C NE, Sec. 62, Blk. 5, I. & G. N. Sur.	Drlg., 1,950 ft.
Empire G. & F. Co.'s No. 8 Burnett est.	Drlg., 1,840 ft.
Magnolia Pet. Co.'s No. 5 fee 244	Drlg., 3,097 ft., 2,000 ft. oil in hole; top pay gran. wash 3,090 ft.
Marston Oil Co.'s No. 1 J. L. Noel	S.D., 3,064 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y	Set 6-in., 2,496 ft; S.D., 2,712 ft.
Stubbiefield et al's No. 1 E. Cooper, SW cor. NE, Sec. 5, Blk. 9, I. & G. N. Sur.	Small show oil, 3,019 ft; 1,500 ft. oil in hole; 3,091-3,116 ft; swab. 200 bbls. first 24 hrs; 45 bbls. third day; aver. 40 bbls. past week, will deepen.
The Texas Company's No. 2 C. R. Garner	Spudding.
The Texas Company's No. 1 Chas. Kalka	Rig.
R. M. Waggoner's No. 1 J. W. McConnell (was completed for 37,000,000 ft. of gas, 2,255-2,500 ft.)	Top pay 3,250 ft., S. D. 3,262 ft., 1,000 ft. oil.
Willis et al's No. 1 Burnett est., C SE SW NW, Sec. 111, Blk. 5	S.D., 2,300 ft.
CASTRO COUNTY	
Colorado O. & R. Co.'s No. 1 M. Siemmons, SW cor. Sec. 78, Blk. M-17, B. S. & F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 233, Blk. M-6, S. E. & K. Sur.	S.D., 510 ft. for casing.
CHILDRESS COUNTY	
Continental Oil Co.'s No. 1 B. P. Smith, C NE, Sec. 14, Blk. 9	Wtr., 2,450 and 2,800 ft; drlg., 3,-200 ft.
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 736, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	Set 6-in. pipe, 2,902 ft; T.D. 3,050 ft; U.R. at 3,000 ft.
COTTLE COUNTY	
Exploration Co.'s No. 1 Richards	Spudded and S.D.
DALLAM COUNTY	
Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17	Hole full wtr., 4,007-4,127 ft; T.D. 4,188 ft; S.D. until Spring.
Marland Oil Co.'s No. 1 A. M. James, C SW W ¼, Sec. 21, S. H. McElreath Sur.	Drlg., 2,350 ft.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 36, Blk. 18, Capitol Synd. land	T.D. 2,620 ft; U.R. 8-in. casing.
DONLEY COUNTY	
A. T. Drlg. Co.'s No. 1 F. E. Harrington, Sec. 39, Blk. 3-C	1,200 ft. wtr., 3,115-22 ft; show gas, 3,140-60 ft; dry grnt. wash, 3,260-93 ft; T.D., 3,498 ft., underreaming.
FLOYD COUNTY	
Explin. Co.'s No. 1 S. H. Boone, C. C. H. Johnson Sur.	Spudded and S.D.
Explin. Co.'s No. 1 Land & Cattle Co.	S.D., 780 ft. for orders.
Hoffer Oil Corp.'s No. 1 Nelson	Location.
GRAY COUNTY	
Amogray Oil Co.'s No. 1 A. Chapman, SW NW SW, Sec. 9, Blk. 26, H. & G. N. Sur.	2,000,000 ft. gas, 2,150-55 ft; 15,-000,000 ft. gas, 2,240 ft; grnt. wash, 2,610-15 ft. and 2,623-25 ft; T.D., 2,761 ft; flowed and swabbed 211 bbls. small inc. oil and gas, 2,720-25 ft.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B	T.D., 2,715 ft; cement, 8-in. 2,659 ft., gas broke in.
Camel Oil Co.'s No. 1 Harrah, Sec. 163, Blk. 3, I. & G. N. Sur.	Pay, 3,121-23 ft; increase 3,126 and 3,185 ft; flowed 60 bbls. daily, 3,265 ft; drlg. deeper.
Camel Oil Co.'s No. 1 B. E. McKinney	Rig.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17, Blk. 1	S.D., 3,860 ft.
Danciger et al's No. 2 W. Jackson, SW SE NW, Sec. 88, Blk. B-2	Drlg., 2,510 ft.
Danciger et al's No. 3 W. Jackson, SE SW NW, Sec. 88, Blk. B-2	Drlg., 2,755 ft.
Danciger et al's No. 4 W. Jackson	Drlg., 2,280 ft.
Donley Gray Oil Co.'s No. 1 J. W. Gordon, Sec. 79, Blk 3.	Wtr., 3,380 ft. and 3,430 ft; show oil; S.D., 3,460 ft.

(Continued on Page 150)

PANHANDLE COMPLETIONS

Hutchinson County

Phillips Petroleum Co.'s & Coble Oil Co.'s No. 22 J. A. Whittenburg made 40 bbls. after a 60-quart shot at 2,945-66 feet. The Texas Company's No. 1 J. L. Moore, which swabbed 105 bbls. initial from pay at 2,985-3,055 feet, averaged 40 bbls. daily for the past week and was completed. Tyler Oil Co.'s (Golden Eagle's) No. 1 J. Q. Bost, which has been spudded and shut down for some time, was temporarily abandoned.

Carson County

The Texas Company's No. 1 J. C. McConnell-B was completed for 51,000,000 feet of gas at 2,637-70 feet.

Gray County

Danciger Oil & Refining Co.'s No. 1 W. Jackson, which flowed 1,777 bbls. initial at total depth of 3,125 feet, settled to 350 bbls. and was completed. It had granite wash pays at 3,000-35 feet and 3,040-3,125 feet. Majestic Oil Co.'s No. 2 Bowers, which flowed 900 bbls. initial at 2,991-3,055 feet, has settled to 650 bbls. and was completed. Amagray Oil Co.'s No. 1 A. Chapman flowed and swabbed 211 bbls. at 2,761 feet and will be drilled deeper.

Wheeler County

Hatcher and others' No. 1 Fee made 19,000,000 feet of gas at 1,508-31 feet.

TEXAS PANHANDLE PRODUCTION OF MAJOR COMPANIES

Week ending November 12, 1927

Company—	Wells	Bbls.	Aver.
Hutchinson County			
Amerada Pet. Corp.	10	389	38.8
Derby Oil Co.	11	484	44.0
Dixon Creek Oil Co.	43	3,526	82.0
Empire G. & F. Co.	26	781	30.0
Gulf Prod. Co.	98	5,651	57.6
Hughes, J. K., Dev. Co.	22	705	32.0
Marland Oil Co.	56	1,546	28.5
McMan O. & G. Co.	25	1,162	46.5
Midwest Exp. Co.	25	1,866	64.5
Fantex Oil Co.	9	585	65.0
Phillips	245	18,057	73.7
Prairie and Phillips	73	3,073	42.1
Prairie O. & G. Co.	9	280	31.1
Prairie et al	9	901	100.0
Pure Oil Co.	5	606	121.2
Roxana Pet. Corp.	11	2,632	239.2
Skelly Oil Co.	29	871	30.0
The Texas Company	3	510	170.0
White Eagle O. & R. Co.	24	948	39.5
Totals	732	44,573	
All other companies	279	16,107	
Grand totals	1,011	60,680	
Carson County			
Empire G. & F. Co.	8	592	74.0
Gulf Prod. Co.	21	290	14.0
Magnolia Pet. Co.	3	354	118.0
Marland Oil Co.	22	902	35.5
McMan O. & G. Co.	11	500	45.4
Prairie O. & G. Co.	10	899	89.9
Roxana Pet. Corp.	15	774	51.6
Skelly Oil Co.	10	1,360	136.0
The Texas Company	17	475	28.0
Totals	118	6,146	
All other companies	43	1,339	
Grand totals	161	7,485	
Gray County			
Empire G. & F. Co.	8	356	44.5
Gulf Prod. Co.	16	2,750	171.8
Humble O. & R. Co.	13	483	37.1
Magnolia Pet. Co.	22	732	33.2
McMan O. & G. Co.	10	401	40.1
Marland Oil Co.	1	45	45.0
Midwest Expl. Co.	1	83	83.0
Phillips Pet. Co.	7	286	40.8
Prairie O. & G. Co. et al	19	1,093	57.5
Pure Oil Co.	9	658	73.1
Roxana Pet. Corp.	5	400	80.0
The Texas Company	8	208	26.0
Wilcox-Pampa Oil Co.	30	1,553	51.7
Totals	148	9,048	
All other companies	24	5,292	
Grand totals	172	14,340	
Totals, Panhandle	1,387	83,680	

May Extend the Winkler County Field

Amerada Test 3 Miles Northeast Thought to Have Chance of Making Producer. Hendrick Pool Has 80 Drilling

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., Nov. 14.—The Winkler County situation is holding the attention of West Texas producers at this time, due to the fact that Southern Crude Oil Purchasing Co. has cut off its connections in the field and at the same time there is every indication that the pool is to be extended 3 miles to the northeast.

There are 80 drilling tests in the Hendricks Pool and so far the completions have averaged considerably more than 1,000 bbls. each, even including the small well of Murchison & Cranfill Brothers and the Southern Crude's apparently dry offset to the big producer in Section 4, Block B-12.

The northeast extension test referred to is Amerada Petroleum Corp.'s No. 1 Walton in the SW cor. NW of Section 48, Block 26. This well cored brown lime at 2,334 feet which carried oil and the 8-inch casing is being cemented at that depth. Rotary tools are also being torn down and replaced with standard equipment. Considering the fact that this test is 3½ miles northeast of the discovery well and 3 miles east of the north extension producers, a majority of observers expected it to be low on the lime and many good oil men figured that it did not have more than an outside chance to get production. With a surface elevation of 2,838 feet, the bottom of the hole at present is 504 feet above sea level. It is the consensus of opinion that the Big lime has not been reached but will probably be encountered within the next 200 to 300 feet, and even if it is reached 400 feet below this depth the well has an excellent chance of making a good producer. The highest producer in the field has a subsurface datum of plus 544 feet on top of the lime while the lowest producer topped the lime 104 feet above sea level.

Several wells have had excellent showings in the anhydrite above the lime and it is thought the Amerada well's present showing is equivalent to these. Southern Crude's No. 1 Hendricks, in Section 42, Block B-5, the discovery well, would probably have made 100 bbls. at 2,510-50 feet while the regular pay was found at 2,990 feet.

Atlantic Oil Producing Co. added the seventeenth producer to the Hendricks Pool when No. 1 Hendricks in NW cor. E half SW, Section 34, Block B-5, came in flowing 1,500 bbls. the first 24 hours at 2,860 feet. Top of pay was 2,826 feet. After drilling to 2,868 feet, this well flowed 1,681 bbls. during the 24 hours ending Sunday morning.

Yates Pool

The Yates Pool in Pecos County continues to look as big as ever, an estimated 800-bbl.-an-hour well having been added during the past week, and a north extension test flowing 4,842 bbls., while one of the Gulf Production Co. tests northwest of production seems almost certain to be a big producer.

The Mid-Kansas and Transcontinental's No. 2 Yates-C, in Section 60, an inside location, topped pay at 955 feet and at total depth of 993 feet was estimated good for 800 bbls. an hour. It was immediately pinched in, however, and last Friday gauged 3,204 bbls. while it flowed 2,850 bbls. Saturday. This is the well which was reported last week as having found the best shallow production in the field. It is a west offset to Marland Oil Co.'s No. 4 Yates-A.

Mid-Kansas and Transcontinental's No. 1 Yates-D, north extension well in Section 62, Block 1, was reported last week as a good producer. It was drilled deeper in the pay topped at 1,063 feet and at 1,285 feet flowed 2,300 bbls. in 12 hours through a 4-inch line. Last Friday it made 3,510 bbls. flowing through a 4-inch line for 12 hours and a cracked 4-inch for the other 12 hours. Saturday's gauge was 4,842 bbls. under the same conditions.

McMan and Marland's No. 8 Yates, in the narrow strip north of Section 36, Block 194, extended production about half a mile westward when it flowed 400 bbls. at 1,340-50 feet.

Mid-Kansas and Transcontinental's No. 5 Yates-B, in the eastern part of Section 61, Block 1, flowed 1,035 bbls. in 24 hours through a 4-inch line while drilling at 1,092 feet in pay topped at 941 feet.

At 7 a. m., November 8, the Illinois Pipe Line Co. started running oil regularly to Del Rio through its 8-inch line and during the first four days averaged about 11,500 bbls. daily. The deliveries for the four days including November 9 to 12, were as follows: 10,910 bbls.; 11,228 bbls.; 11,806 bbls.; and 11,903 bbls.

Report on Water

The water situation on the eastern edge of the Yates Pool has not grown any worse during the past few weeks and no other section of the field is troubled in that way. Saturday's report on the wells making water is as follows:

Marland Oil Co.'s No. 1 Yates-A made 240 bbls. net oil, 62 per cent water at the well, flowing through five-sixteenths-inch choke under 250 pounds pressure. Marland's Nos. 2, 3 and 4, on this tract, were shut in for proration production tests which were scheduled for November 15.

Gulf Production Co.'s No. 1 Thompson, across the river in Crockett County, was making no oil, having been shut in after flowing 100 per cent water; No. 2 made 242 bbls. oil net, Saturday and 1 per cent water.

Allsman & Bell's No. 1 River Bed made 40 bbls. of fluid, 40 per cent water, through one-eighth-inch choke; No. 3 made 682 bbls. of fluid 28 per cent water, through various chokes.

Mid-Kansas Oil & Gas Co.'s No. 3 Yates-B, which at one time made a small trace of water, flowed 734 bbls. of clean oil Saturday; No. 4 Yates-B, which is just north of No. 3-B, flowed 554 bbls. Both of these wells are under small chokes.

Pipe Line Increase

The pipe line capacity of the Yates Pool is to be increased considerably in the near future. Illinois Pipe Line Co. is going to increase the Del Rio line to 35,000 or 40,000 bbls. daily by adding nine booster stations. Electric motors have already been ordered for five of these.

Humble Pipe Line Co. is also building a booster station just west of the Powell Pool in Crockett County which will increase the capacity of that line to about 25,000 bbls. daily. This line runs from the Yates Pool to Kemper station in Reagan County.

Gulf Pipe Line Co.'s carrier from the field to a point about 4 miles east of McCamey in Upton County is also under construction and will be ready before long. Gulf is building two 80,000-bbl. tanks at McCamey and a 50-car loading rack.

In Upton County, Champlin Refining Co.'s No. 2 Lane, located in Section 3, G. C. & S. F. Survey, one location east of No. 1, flowed 60 bbls. an hour, 6 per cent water, at 1,997-2,000 feet. The Orient Railroad obtained its first production on the right of way extending through the Hurdle area when No. 1, carried un-

WILDCAT OPERATIONS IN WEST TEXAS

Week ending November 12, 1927

Company, farm and location—	Remarks—
ANDREWS COUNTY	
George B. Calvin's (was Calvin & Belt's) No. 1 Ratliff & Bedford, C NE Sec. 16, Blk. A-54	Hole full fresh water 1,055 ft top salt 1,610 ft.; total depth 1,920 ft.; run. 8-in.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 8, Blk. 73, Public School Land	Top salt 1,585 ft.; drilling 3,400 ft.
Sartain Oil Co. et al's (was Deep Rock Oil Co.'s) No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land, elev. 3,167 ft.	Hole full fresh water 1,050 ft.; shut down 1,260 ft.
B. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 12, Blk. A-35, Public School Land	Shut down 1,020 ft. for 10-in. casing.
A. G. Carter & Zweifel's No. 1 Cowden, C SE Sec. 18, Blk. A-52, Public School Land Sur., elev. 3,156 ft.	Top salt 1,375 ft.; encountered pocket of air 3,635 ft.; drilling 4,520 ft.
BORDEN COUNTY	
Marland Oil Co.'s No. 1 G. E. McDavid, C SW Sec. 156, Blk. 25, H. & T. C. Sur.	Rigging up.
BREWSTER COUNTY	
Mid-Kansas O. & G. Co.'s No. 1 Turney, Sec. 77, Blk. 213, T. & St. L. Sur.	Shut down 1,415 ft.
Reese & White's No. 1 Kimbale, C NE Sec. 204, Blk. 9, G. H. & S. A. Sur.	Spudded and shut down
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,025 ft.
Wilcox & Anderson's No. 1 Gage, Sec. 8, Blk. 300, T. C. R. R. Sur.	Drilling 1,410 ft.
COKE COUNTY	
W. H. Brown et al's No. 1 W. L. Foster, SE cor. Sec. 142, Blk. 2, H. & T. C. Sur., elev. 2,222 ft.	Shut down 2,250 ft.
Danciger O. & R. Co.'s No. 1 Mrs. Byrnes, Clinton Sur.	Drilling 2,830 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H. & T. C. Sur.	Show oil 1,224-34 ft.; drilling 2,680 ft.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H. & T. C. Sur., elev. 2,750 ft.	Total depth 2,736 ft.; drilling 2,716 ft.
CONCHO COUNTY	
The Exploration Co.'s No. 1 Hartgrove, Blk. 240, J. Schouch Sur., elev. 1,718 ft.	Drilling 710 ft.
CRANE COUNTY	
Crane Dev. Co.'s No. 1 J. R. Mosley, S cor. Sec. 18, Blk. 6, H. & T. C. Sur.	Drilling 200 ft.
Marland Oil Co.'s No. 1 Union Land, E cor. of W Sec. 38, Blk. 35, H. & T. C. Sur., elev. 2,298 ft.	Top salt 825 ft.; 1,300 ft. sulphur water at 2,100 ft.; flowing sulphur water 2,265 ft.; shut down.
Duffey & Gault & Brown's No. 1 Cowden, CNL S half NE Sec. 22, Blk. X, C. C. S. D. Sur.	Hole full fresh water 620-25 ft., top salt 895 ft.; top lime 2,729 ft.; shut down for casing 2,754 ft.
Gulf Prod. Co.'s No. 3 W. N. Waddell, SE cor. NE Sec. 3, Blk. B-25, Public School Land	Building rig.
J. K. Hughes Dev. Co.'s No. 1 State Bank Commission, CSL Sec. 18, Blk. 4, H. & T. C. Sur.	Location.
Texas Development Co.'s No. 1 J. Cowden	Total depth 3,850 ft.; was temp. abd. last summer; rigging up to deepen; top lime 2,635 ft.
CROCKETT COUNTY	
George Anderson and Marland Oil Co.'s No. 1 University	Hole full sulphur water 1,800 ft., ½ bailer oil 2,240 ft.; ½ bailer sulphur water per hour 2,475 ft. shut down 2,631 ft.
V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur.	Shut down 2,110 ft
Corbett & Gill's No. 1 University	Top salt 855 ft.; smell gas 1,800 ft.; shut down 1,920 ft.
J. S. Cosden, Inc., No. 1 Paul Perner, SW cor. Sec. 36, Blk. 2, I. & G. N. Sur.	Drilling 320 ft.
Epeneaur et al's No. 1 Noelke, SW Sec. 30, Blk. GG, G. C. & S. F. Sur.	Show oil 828-29 ft.; drilling 1,550 ft.
C. A. Jones et al's No. 1 Powell	Top salt 1,050 ft.; fishing 2,200 ft.
James Kelly et al's (was Corbett & Gill's) No. 1 Todd, C NE Sec. 43, Blk. WX, G. C. & S. F. Sur.	Top salt 993 ft.; show oil 1,948 ft.; drilling 2,360 ft.
Van McPhail's No. 1 George Thompson	Location.
Van McPhail et al's No. 1 George Thompson	Location.
Magnolia Pet. Co.'s No. 2 Shannon	Show oil 2,385-90 and 2,992 ft., total depth 4,100 ft.; fishing 26 joints 8-in. casing.
Newman Oil Co.'s No. 1 B. C. Clark	Top salt 640 ft.; base salt 1,315 ft.; drilling 1,919 ft.
Bob Penn's No. 1 L. P. Powell	Drilling 100 ft.
William Shaffer et al's No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur., elev. 2,344 ft.	Shut down 2,344 ft.
William Schaffer et al's No. 2 University, 1,350 ft. N and 2,610 ft. E of SW cor. Sec. 9, Blk. 47, University Land	Top salt 1,060 ft.; first oil show 2,190-96 ft.; second 2,225-29 ft.; 1 bailer oil in 10 hrs. at 2,590 ft.; shut down 2,635 ft.; brown lime.
Simmons Oil Co. et al's No. 1 H. M. Halff, NW cor. Sec. 69, Blk. 1, I. & G. N.	Rigging up.
W. W. Donnelly & Young's No. 1 Massey, Sec. 29, Blk. U-V	Shut down 150 ft.
McManmon Oil Co.'s No. 1 Blakeney	Shut down 3,485 ft.
World Oil Co.'s No. 1 Schneeman-B, Sec. 50, Blk. BB, G. C. & S. F. Sur.	Top salt 1,070 ft.; hole full sulphur water 2,210-15 ft.; fishing 2,255 ft.
Young & Donnellys' No. 1 J. M. Shannon, C Sec. 11, Blk. 9, D. & S. E. Sur.	6,000,000 ft. gas at 1,662 ft.; shut down 1,676 ft.
CULBERSON COUNTY	
Deep Rock Oil Co.'s No. 2 Kloh-Rumsey, Sec. 21, Blk. 29, T. & P. Sur., T-1 (NE of No. 1)	Drilling 600 ft.
James H. Gardner et al's No. 1 Radford, C SE Sec. 29, Blk. 62, Public School Land Sur.	Straightening hole 610 ft.
Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School Blk. 97	Spudded and shut down.
ECTOR COUNTY	
J. S. Cosden, Inc., et al's No. 2 Connell-A, NW cor. NE Sec. 13, B-16, School Land, elev. 2,844 ft.	Top pay 3,471 ft.; shut down 3,515 ft.

(Continued on Page 148)

der the name of R. H. Paxton, flowed and swabbed 518 bbls. at 1,958-2,038 feet, with 3 per cent sulphur water. When drilled 2 feet deeper, it flowed 160 bbls. by heads and had 8 per cent water .

NORTH CENTRAL TEXAS AND WEST TEXAS ESTIMATED DAILY PRODUCTION
Week ending November 12, 1927

Ranger district—	Prod.
Brown County	19,575
Callahan County	3,985
Coleman County	1,150
Comanche County	1,500
Palo Pinto County	460
Ranger	7,915
Shackelford County	5,035
Stephens County	8,865
Total, Ranger district	48,485
Decrease	325
Wichita Falls district—	
Archer County	22,910
Baylor County	85
Clay County	550
Cooke County	5,500
Jack County	995
Montague County	9,880
Throckmorton County	1,255
Wichita County	28,315
Wilbarger County	10,795
Young County	12,340
Total, Wichita Falls district	92,625
Decrease	1,075
Total, North Central Texas	141,110
West Texas district—	
Big Lake Field	22,900
Crane County	107,125
Crockett County	2,166
Ector County	12
Glasscock County	S. D.
Howard County	4,248
Jones County	1,348
Loving County	75
Mitchell County	3,373
Pecos County	32,339
Runnels County	100
Scurry County	45
Upton County	18,640
Winkler County	17,461
Total, West Texas district	209,832
Decrease	3,774
Grand total, North and West Texas	350,942
Decrease	5,174

WEST TEXAS COMPLETIONS

Crane County

Gulf Production Co.'s No. 43 J. T. McElroy flowed 367 bbls. by heads at total depth of 2,860 feet. Top of pay was 2,767 feet. Magnolia Petroleum Co.'s No. 11 University-Hardwicke was completed for 340 bbls. after a 150-quart shot at 2,841-94 feet. Same company's No. 11 O'Keefe-University flowed 600 bbls. after a shot of 100 quarts at 2,880-2,985 feet.

Howard County

F. H. E. Oil Co.'s No. 1 Roberts-B was completed for 3,450,000 feet of gas at 1,915 feet.

Loving County

Lockhart & Co.'s No. 1 R. L. Allen was listed as a completion good for 80 bbls. Last week it averaged 76 bbls. It was shot October 22 with 100 quarts at 4,194-4,234 feet. Total depth was 4,342 feet, plugged back to 4,298 feet.

Mitchell County

B. E. Walter's No. 1 J. E. Dollen was temporarily abandoned at 2,955 feet, where it has been standing for some time with a hole full of sulphur water.

Pecos County

Humble Oil & Refining Co.'s No. 2 Smith flowed 110 bbls. hourly at 1.425-35 feet, flowing open. Total depth is 1,510 feet. Marland Oil Co.'s No. 2 Yates-A swabbed 720 bbls. in 24 hours, 35 per cent water, at 1,033-1,148 feet; No. 4 Yates-A flowed 735 bbls. in five hours, flowing open, from pay at 971-1,055 feet.

Mid-Kansas and Transcontinental's No. 6 Yates-B flowed 2,582 bbls. through a 4-inch line from pay at 985-1,072 feet; No. 2 Yates-C was estimated good for 800 bbls. an hour at 955-93 feet.

Upton County

R. H. Paxton's (K. C. M. & O. R. R. Co.'s) No. 1 Orient right of way topped pay at 1,958 feet and was drilled to 2,038 feet, flowing and swabbing 280 bbls. in 12 hours, 3 per cent of which was sulphur water. It swabbed 518 bbls. last Friday. Sunday it was deepened 2 feet and afterward flowed 160 bbls. by heads, making 8 per cent water. Eastland Oil Co. and Brandon & McCamey's No. 1 Union Land Co., in Section 34, Block 1, M. K. T. Survey, encountered a hole full of sulphur water at 2,178-2,222 feet and was ordered plugged.

Winkler County

Murchison Oil Co. and Cranfill Brothers' No. 3 Grisham-Hunter was completed for 80 bbls. at 2,696 feet. The best this well did was 109 bbls. as reported last week after a shot of 300 quarts from 2,563-2,683 feet.

NORTH CENTRAL TEXAS COMPLETIONS

Archer County

Atlantic Oil Producing Co.'s No. 6 Wilson-D made 10 bbls. from sand at 1,544-47½ feet. Consolidated Oil Co. and Marland Oil Co.'s No. 1 Carter was dry and abandoned at 1,852 feet. Consolidated Oil Co. and Underwood's No. 1 Ward was also a failure at 1,151 feet.

Cook & Reeder's No. 1 Hayter was also a duster at 1,454 feet. McGregor and Panhandle Refining Co.'s No. 3 Farmer pumped 40 bbls. from sand at 1,503½-06½ feet, total depth 1,507 feet. Murchison Oil Co.'s No. 1 Cowan was dry and plugged at 1,102 feet.

Cooke County

Camp-Hedrick and Oil Operators Trust Co.'s No. 1 Bayer made 14 bbls. at 1,-647-52 feet. N. H. Martin and others' No. 1 Bindle was good for 69 bbls. at 1,370-93 feet. Stroube & Stroube abandoned the location for their No. 6 Koelzer-A.

Sun Oil Co.'s No. 6 Hacker made 34 bbls. from sand at 1,634-50 feet and broken sand at 1,650-59 feet. The Texas Company's No. 3 Koelzer made 33 bbls. from broken sand at 1,643-90 feet.

Jack County

Connell & Wixon's No. 2 Ellis and others was estimated good for 12 bbls. in broken sand from 501-30 feet after a 13-quart shot at 504-19 feet. Dale Oil Corp.'s No. 1 Hanna made 6 bbls. initially from sand topped at 343 feet. The well was drilled into water at 351 feet and plugged back 2 feet.

O'Neal & White and others' No. 1 Street was dry and abandoned at 571 feet. Shaw & Rathke's No. 3 Cullers made 80 bbls. at 1,997-2,008 feet.

Montague County

The Texas Company's No. 2 Hinton made 80 bbls. from sand at 780-94 feet, total depth 799 feet. McGinley Oil Corp.'s No. 1 Steadman was dry and plugged at 2,003 feet.

Throckmorton County

Bridwell & Heydrick's No. 1 Upshur Co. was abandoned as dry at 1,382 feet.

Wichita County

Lomax, Thornton and others' No. 1 Mrs. B. Parker was dry and abandoned at 1,861 feet. Simms Oil Co. and others' No. 1 B. H. Preston was also a failure at 1,761 feet. It had a small show of oil and gas which was considered sufficient for a shot but 40 quarts placed at 1,534-64 feet failed to produce results.

Wayne Hammon's No. 4 Kemp & Kell pumped 3 bbls. at 669-83 feet. Same operator's No. 1 T. F. Mitchell was dry and plugged at 1,896 feet.

L. P. Hammond's No. 6 Grace Jennings pumped 25 bbls. at 1,822-31 feet. Henry Hobbs' No. 1 J. A. Watkins pumped 96 bbls. from sand at 1,523-25 feet. John O'Neil and others' No. 1 Kemp and Kempner pumped 15 bbls. from sand at 1,813-16 feet. Petroleum Producers Co.'s No. 1 Kemp & Kempner was a duster at 1,840 feet. C. P. Sheldon and associates' No. 1 J. M. Honaker swabbed 40 bbls. from sand at 1,-646-60½ feet and was being put on the pump.

Young County

Atlantic Oil Producing Co.'s No. 2 Keen pumped 30 bbls. from sand at 807-19 feet. Christie's No. 1 Young was dry and plugged at 1,270 feet. Hamilton and others' No. 1 Neeley was also plugged as a dry hole at 1,153 feet. Mise and others' No. 1 Hamilton was dry at 910 feet. And so was The Texas Company's No. 1 McClatchey at 1,152 feet.

Conner and others' No. 1 McCluskey flowed 475 bbls. of oil and 10 bbls. of water from lime at 4,184-4,232 feet. Cosden's No. 1 Jones was dry and abandoned at 4,860 feet. Jacob's No. 1 Weldon was preparing to plug and abandon at 4,435 feet.

Linsley & Bollin's No. 1 Graham was estimated good for 25 bbls. on the pump from sand at 2,050-78 feet. Nash & Windfohr's No. 1 Hinson flowed 20 bbls. an hour with a little water from sand at 2,199-2,207 feet.

Pitzer & West's No. 3 Morrison-A flowed 600 bbls. of oil and 500 bbls. of water from sand at 2,213-20 feet and at 2,227-35 feet. Roxana Petroleum Corp.'s No. 12 Ford was good for 100 bbls. initially on the pump. It had lime at 4,260-2,342 feet. Westerfelt & Noble's No. 8 Graham-B was flowing an estimated 200 bbls. from sand at 3,315-16 feet when the rig burned.

Wilbarger County

Landreth Production Corp.'s No. 1 Carter was dry and abandoned at 1,902 feet.

Wise County

Cummings and others' No. 1 Rogers was dry and abandoned at 2,008 feet. Boonville Oil Co.'s No. 1 Carter was dry at 1,475 feet.

RANGER DISTRICT COMPLETIONS

Brown County

Amerada Petroleum Corp.'s No. 1 Moore was abandoned as a dry hole at 1,515 feet. Canyon Oil & Gas Co.'s No. 6 Ellsberry was temporarily abandoned. Cranfill & Reynolds' No. 17 Smith made 50 bbls. from sand at 1,340-57 feet, following shots of 10 and 5 quarts. J. K. Hughes Developing Co.'s No. 1 Mauldin made 25 bbls. at 1,355-65 feet.

Humble Oil & Refining Co.'s No. 12 Armstrong was a 34-bbl. completion following a 30-quart shot at 1,211-21 feet; No. 8 Gilbreath flowed 133 bbls. the first 13 hours at 1,310-24 feet and will be deepened; No. 23 Hickman pumped 4 bbls. from sand at 1,216-40 feet.

Kone Production Co.'s No. 8 Hickman missed the sand entirely and was plugged at 1,250 feet. Phillips Petroleum Co.'s No. 7 Newsome made a 25-bbl. well at 1,322-35 feet after a 12-quart shot.

Rex-Tex and Py-Tex Oil Co. abandoned No. 1 Scott at 1,914 feet. E. L. Moore's No. 6 Moore was a 3-bbl. well at 1,278-92 feet after a 10-quart shot. Volz's No. 1 Perry made 25 bbls. after a 10-quart shot at 1,230-40 feet.

Bush & Spinney's No. 1 Richardson was still flowing 35 bbls. daily at 1,435-37 feet. Five-inch casing is being set with perforated joint.

Clark and others' No. 3 Guyer had water sand at 740-52 feet and at 833-44 feet. It was abandoned at 855 feet. Longre's No. 1 McDonald made 2,700,000 feet of gas from sandy lime at 1,473-1,516 feet. It was shot with 30 quarts from 1,496-1,519 feet.

Callahan County

Bradstreet's No. 2 Waller was shot with 45 quarts at 1,680-1,725 feet and made 150 bbls.; No. 3 Waller made 160 bbls. following a 60-quart shot at 1,680-1,724 feet.

Gibson & Johnson's No. 1-N Newman was plugged at 865 feet; No. 1-S Snyder was also dry at 1,119 feet; No. 2-S Snyder made 25 bbls. at 923-31 feet; and the location for No. 1-SB Snyder was abandoned.

Martin's No. 1 Jackson was a failure at 1,580 feet. Prairie Oil & Gas Co.'s No. 2 T. E. Baum pumped 10 bbls. at 1,677-88 feet, total depth 1,743 feet. Ross Petroleum Co.'s No. 1 Moore was dry and plugged at 1,952 feet. Shadbolt & Creighton's No. 1 Hall was also a duster at 1,000 feet. Skelly Oil Co.'s No. 1 Orrell pumped 2 bbls. after a shot of 100 quarts at 1,647-70 feet. Total depth is 1,700 feet, plugged back to 1,670 feet.

Coleman County

English and others' No. 1 Harris was shot with 30 quarts at 4,072-95 feet after which it made 8,000,000 feet of gas and 15 bbls. of oil the first 50

(Continued on Page 151)

Late News from the Fields

OKLAHOMA

The Greater Seminole Field produced 419,223 bbls. for the 24 hours ending Tuesday of this week at 7 a. m. The production was divided as follows:

Little River	44,936
Bowlegs	126,723
Earlsboro	159,953
Seminole	60,414
Searight	27,297
Total (from 997 wells)	419,223

The only new wells to be announced were of small initial output, and the shooting of wells is responsible for the current rate of production. The Indian Territory Illuminating Oil Co.'s No. 6 Soketche, SW cor. NE Section 1-7-6, in Little River Pool has 2,500 feet of water in the hole from sand 4,428-4,447 feet.

In the Searight Pool, H. F. Wilcox Oil & Gas Co.'s No. 7 Cluck, NW cor. NE NW Section 4-9-6, swabbed 560 bbls. from sand 4,441-4,442 feet.

South of the Earlsboro Field, the Empire Oil & Refining Co.'s No. 1 Karr, NW cor SW Section 34-9-5, has a hole full of water in a deep formation, possibly the Siliceous lime, touched at 5,038-5,045 feet.

WEST TEXAS

FORT WORTH, Tex., Nov. 15.—Gulf Production Co.'s No. 7 Hendrick, SE SW NW, Section 34, Block B-5, Winkler County, began flowing 22 bbls. an hour at 2,870 feet and flowed 30 bbls. an hour at 2,882 feet. Tuesday morning the company's reports showed it making fourtenths of 1 per cent water. Gulf's No. 6 Hendrick, in the NE cor. NW, same section, offsetting Texon's No. 1-A, was spraying 45 bbls. at 2,635 feet in brown lime. In Crane County, Gulf Production Co.'s No. 43 J. T. McElroy flowed 645 bbls. after a 200-quart shot at 2,767-2,869 feet, total depth 2,879 feet. Location was made for No. 45 J. T. McElroy, a regular distance due west of No. 43. In Pecos County, Gulf's No. 3 Yates in the northwestern part of the area under development has 500 feet of oil in the hole at 1,267 feet. Surface elevation is 2,549 feet.

The Marland Oil Co.'s No. 7 Yates, in Section 34½, a strip lease on the west side of the Yates Pool, in Pecos County, Texas, came in Monday flowing 640 bbls. an hour from 112 feet of sand topped at 1,193 feet. It is located about three miles northwest of the discovery well.

Roxana Petroleum Corp.'s No. 2 Tippett topped pay at 1,350 feet and flowed 140 bbls. at 1,440 feet.

In northwestern Crockett County, Furhman and others' (formerly Newman's) No. 1 Clark, Section 1, Block B, G. C. & S. F. Survey, topped lime at 1,930 feet or plus 754 feet which is lower than they expected it. This well has been watched closely, being in the Upton to Yates trend, and it commanded some fancy prices.

MISSISSIPPI

SHREVEPORT, La., Nov. 15.—Northeastern Mississippi apparently has its second gas well of commercial proportions in Natural Gas and Fuel Corp.'s No. 1 Rye, Section 22-15-17, Monroe County, 12 miles south of Amory Petroleum Co.'s discovery well completed about a year ago. Last Thursday a small show of gas was reported at 2,445 feet. Drilled to 2,590 feet it showed a little water and deepened another foot it blew out again with about 1,000,000 feet of gas in 6 feet of sand. It was drilled 2½ feet further into the sand and is now estimated at 2,000,000 to 4,000,000 feet of gas and is still drilling with cable tools. Six and five-eighths-inch casing was set but not cemented at 2,437 feet, total depth 2,693½ feet, with about 10 feet of sand. Midway between this well and the discovery well, completed at 2,470 feet, is a salt water hole.

NORTH LOUISIANA

SHREVEPORT, La., Nov. 15.—Drilling in after setting 8¼-inch casing at 3,069 feet, Magnolia Petroleum Corp.'s No. 1 Zula Roberson blew in with an estimated 38,000,000 feet of gas, total depth 3,076 feet, as one of the largest

(Continued on Page 151)

Dunn Safety Elevators

The "Rotary Flyer" Double-Door Type

This is a top view of the Dunn Super-Safety "Flyer" Type Elevator. Note the position of the two hinge pins in direct parallel, both horizontally and vertically, with the links and the load. Absolutely no spreading strains are possible. When under load the weight of the string forces the two doors against the pipe relieving the latch of all strain.

The doors are geared together and the center section, or body, gears the elevator to the pipe.

It is impossible for this elevator to open, or be opened, under any circumstances, while the elevator is carrying the load, but when relieved of the load, it can be opened and closed easily and quickly with a single movement of one hand, as the latch and handle are combined.

Supplied in all rotary drill pipe, casing and tubing sizes.

DUNN
MANUFACTURING COMPANY
OXNARD, CALIFORNIA
Mid-Continent Branch Warehouse-215 E. Archer St. Tulsa, Okla.
Export Sales Office ..... 150 Broadway, New York City

DUNN SAFETY *means* DONE SAFELY

Seminole Production Shows Good Gain

Shooting Increases Output Temporarily, No Locations Made or Operations Carried on Around New Discoveries

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

The greater Seminole area still leads the producing parade in Oklahoma, and continues to make its influence felt in many quarters. During the past week the output of this great area has been between 429,000 and 416,000 barrels daily, with few important completions. The majority drilled in during the week were inside wells.

The three new wells which penetrated the Wilcox sand in the south end of the field are now fully pinched in to a daily production of 100 barrels in accordance with the Seminole operators' agreement, and no new rigs or locations are made adjoining them. The owners of all three wells have made express stipulations that no rig timbers are to be moved in close to their wells. No physical work preparatory to drilling is to be conducted, under pain of opening the new wells widely. The president of a company owning one of the new wells was very emphatic in his assertion that his company's well would be pinched in fully, providing that not even a stick of rig timbers appeared in the locality. If a single timber was placed upon the location, his well would immediately be opened up and drilled in. The owners of adjoining leases have all complied with the terms of this agreement, with the result that the owners of the new wells will be assured of at least 70 days' production after the ban on the new regions is removed. In this manner discovery rights will be amply protected, and the trouble of an extraordinary drilling campaign will be eliminated.

Complete Shut Down

The new finds are characterized by the most complete shut-down movement witnessed thus far in the Seminole region. Now that the primary excitement has subsided, it is a question if the three wells in the new areas were not blessings in disguise. At the time of the discovery, a wave of optimism was sweeping the oil country. With very definte rumors of premiums being paid for Burbank crude, and with a decline in Seminole, the street talk about improved crude prices being imminent was rather general; but when three wells in separate and distinct territories tapped the Wilcox sand and found it productive, the feeling of optimism vanished. Had it been permitted to continue, the drill might have been put to work on too large a scale, and the agony might have been prolonged.

The shooting of wells in the Seminole area has now had a fair chance to prove its effectiveness. The only apparent effect of shooting the Seminole wells seems to be that next week's oil is produced a week ahead of time. The majority of wells shot respond with a huge increase for a few days, and after that the decline is more rapid than normal, until the production reaches the level at which it rested before the shot.

Since the first permission to shoot was granted to the operators, 130 wells in the various Seminole pools have been shot. A careful check of the wells which have been shot reveals that an increase of 12,500 bbls. daily may now be directly attributed to the shots.

The completion of good inside wells in Earlsboro and Bowlegs has tended to maintain the Seminole output above 420,000 bbls. In the Earlsboro Pool especially, good wells were killed in order to be shot. There are instances of wells flowing 600 bbls. daily being killed in order to give them a shot which would increase the daily output to 2,100 bbls. or so, and after 10 days the wells are making about 800 bbls. Shooting in the Seminole Field is believed to have no permanent effect upon the oil production.

Little River Disappointing

The Little River Pool is proving disappointing. This operation touched 46,000 bbls. when 43 wells were completed. During the past 10 days, the total number of Little River wells completed has been raised to 69, and the output remains very little changed, running close to 43,000 bbls. Little River seems very close to its peak.

South of the present limits of Little River, a well which is causing unusual interest is the Snowden & McSweeney test in Section 13-7-6. It is reported that this well is running high geologically. The Mayes formation was found at 3,916 feet, and the well is drilling at a total depth of 4,040 feet. This well is being very closely observed.

West of the Little River Field, the Phillips Petroleum Co. and J. G. Lyons' No. 1 Alexander, in Section 2-7-6, had the Sylvan shale 4,320 feet and the Viola lime 4,325 feet, where the 5-inch casing is being run.

Deeper Drilling in Pontotoc

The old Allen Field in Pontotoc County is now the scene of a mild excitement. Deeper drilling in this area, where oil was formerly produced from a shallow 500-foot sand, has resulted in a daily output of 6,000 bbls. from 22 producing wells. The sand is found from 2,300 to 2,500 feet, and the wells have a good average output. There are now 40 active drilling operations in this territory, and trading in leases and royalties has become rather interesting, some good prices being recorded.

In view of the increased output of the field, the Sinclair Pipe Line Co. is reported building a 6-inch line from the Wewoka Field to Allen.

An important extension of this field will be Ramsey Brothers' No. 1, in Section 8-5-8, which had sand at 2,485-2,515 feet and has a hole full of fluid half oil and half water. The well will be deepened. It will prove up a large section of land should it make a commercial well.

Seminole Pipe Line Runs

The daily average pipe line runs out of the Seminole Field for the week ending November 12 were:

Company—	Runs
Barnsdall	9,842
Mid-Continent Petroleum	11,762
Empire	16,023
Gulf	39,383
Magnolia	34,462
Oklahoma	73,265
Ozark (Roxana)	11,690
Prairie Pipe	62,612
Pure	4,745
Shaffer	14,215
Sinclair	54,760
The Texas Company	27,807
Tidal	2,790
White Oak	1,690
Total	365,046

The average tank car shipments for the week were 14,478 bbls. per day.

An unusually interesting wildcat well which is threatening the depth record of Oklahoma is Wirt Franklin and Cromwell Oil & Gas Co.'s No. 1 Thompson, SW cor. NE NE Section 15-12-3w. This well is now 6,150 feet deep, and still going.

Seminole Production

The production of the Greater Seminole area by companies and leases on Saturday, November 12, was as follows:

Little River

Company and farm—	Wells	Prod.
Amerada:		
Fore	1	230
Nitey	4	3,330
Blackwell:		
Nitey	7	5,550
Carter:		
Fish	1	820
Continental:		
Cosar	2	1,750
Gypsy:		
Campbell	2	1,145
Nungee	1	25
Pottey	1	1,367
Wadsworth	1	25
Independent:		
Harris	1	100
Indian Territory:		
Dungan	3	2,579
House, M. A.	1	1,385
House, W. E., "A"	1	.....
House, W. E., "B"	3	3,142
Jackson	3	3,361
McCulla	3	1,259
Nitey	5	2,955
Phobe, "A"	1	801
Phoebe, "B"	2	1,331
Reed	1	180
Soketheche	4	1,597
Mid-Continent:		
Wadsworth	7	2,250
Smith	1	60
Philmack:		
Davis	1	675
Prairie:		
Dungan	1	40
House	3	3,335
Roxana:		
Smith	1	40
Superior:		
Wadsworth	1	38
The Texas Company:		
Coker	3	555
Tidal:		
House	2	2,050
Johnson	1	185
Totals, Little River	68	42,160

Bowlegs

Amerada:		
Rasco	8	3,390
Atlantic:		
Baker	4	1,235
Fleet	4	1,130
Grayson	2	1,545
Jones, C.	3	135
Atlantic & Denver:		
Jones, A.	2	86
Barnsdall:		
McNac	1	40
Murrow	4	1,554
Carter:		
Bowlegs	3	1,520
Burden	2	110
Harjoche	6	1,650
Hilly	1	1,050
Jones	3	1,270
McGeisey	1	.....
Walker	2	490
Melisse	1	1,315
Wise	12	10,110
Empire:		
Lacy	6	848
Wise	2	1,697
Gypsy:		
Bowlegs	1	332
Bradley	1	132
Dosar	1	110
Brown	1	106
Cumsey	4	1,620
Grayson	4	3,510
Jones	1	260
Walker	8	2,110
Wise	3	272
Independent-Marland:		
Coker	1	45
Indian Territory:		
Barnett	2	780
Billington	5	1,027
Bowlegs	11	1,565
Burden	1	48
Davis	4	3,417
Fay	6	5,880
Goforth	11	2,077
Hull	1	124
Livingston	11	8,678
Lizzie	2	215
Walker	8	1,539
Wilmont	4	1,892
Work	1	.....
Young'lood	4	145
Magnolia:		
Davis	1	157
Hammond	2	101
McColloch:		
Bowlegs	3	190
Mid-Continent:		
Baker	4	2,628
Bowlegs	1	145
Hutke	1	2
Smith	3	745
Minnehoma:		
Bowlegs	4	396
Prairie:		
Gahagan	4	710
Harber	7	5,050
Jones	2	3,305
Templeton	4	6,220
Whitney	4	155
Pure:		
Reed	15	6,883
Strothers, "D"	3	575
Strothers, "E"	1	5
Strothers, "F"	1	596
Roxana and Houston:		
Taylor	6	1,287
Shaffer:		
Lacy	3	911
Sinclair:		
Bowlegs	1	100
Cumsey	2	4,935
Ellen	6	3,742
Harjo	3	1,525
Jones	4	6,950
Taylor	4	3,177
Walker	4	1,600
The Texas Company:		
Reed	9	7,295
Tidal:		
Grayson	3	2,135
Harjoche	5	2,375
Twin States:		
Jones	2	140
Totals, Bowlegs	273	130,126

Earlsboro

Amerada:		
Anderson	4	2,815
Cowden	8	2,977
Rodgers	2	2,075
Barnsdall:		
Brown	4	4,946
Bruner, F.	2	1,308
Bruner, N.	3	3,345
Cudjo, C.	1	30
Davis, D.	3	1,563
Davis, J.	3	4,132
Davis, M.	3	1,260
Gibson	7	3,852
Hearn	1	8
Ingram	7	5,694
Packe	4	367
Peter	4	402
Sango	1	105
Sebolka	1	1,526
Smith	1	6
Sullivan, H.	2	281
Sullivan, Harjo	3	55
Wasutke	3	1,660
Carter:		
Davis	1	1,660
Payne	3	1,345
Sango	3	9,610
Continental:		
Kays	2	2,610
Spencer	4	3,995
Crosbie:		
Bryant	2	2,650
Empire:		
Barker	1	0
Edmundson	3	2,704
Gypsy:		
Bruner	4	8,360
Carter	9	8,367

ONE WELL ADDED TO CEDAR CREEK NO NEW WORK IN GENERAL AREA

By Special Correspondent

MEXIA, Tex., Nov. 12.—One completion in the Cedar Creek Pool in Limestone sums up results in the East Central Texas Field in the past week in review. The Transcontinental Oil Co.'s No. 2, R. P. Ward, Varella Survey pumped 160 bbls. the first 24 hours from sand at 2,896-2,902 feet. No new work was started in the course of the week.

The J. H. Hughes Development Co. tested dry at 2,981 feet in its No. 1 Lewis, in the Cedar Creek area. Reiter, Lewis and others were drilling in chalk at 2,412 feet in No. 3 E. W. Lewis, and had a fishing job at 2,732 feet in No. 2 E. W. Lewis. The Transcontinental Oil Co.'s No. 2 Dugger set casing at 2,863 feet and was drilling at 2,932 feet, and its No. 2 E. W. Lewis was shut down for orders at 2,923 feet after bailing dry in sand at 2,920-23 feet. The Why Not Oil Co.'s No. 1 J. and A. Rhea got sand at 2,898 feet and drilled to 2,902 feet and was cleaning out. Reiter Hicks, Hoover and others' No. 1 Val De Long got a gas sand at 1,257-1,301 feet. The well was drilling at 2,650 feet in shale. Dillon & Hammond's No. 1 Fenner Hoskins Survey is shut down at 2,931 feet.

In Anderson County, Cosden and others' No. 1 Douglas was shut down at 4,620 feet. Humble Oil & Refining Co.'s No. 3 Spencer Clemons was drilling shale and boulders at 2,136 feet. Same company's No. 1 H. T. Jones was drilling in lime at 2,804 feet. The Pure Oil Co.'s No. 1 J. R. Cook, Lewellen Survey, was drilling at 1,064 feet.

In Cherokee County the Humble Oil & Refining Co.'s No. 3 Earl & Ragsdale was drilling at 2,797 feet. The same company's No. 2 Elliott & Clarke has been completed as a 10,000,000-foot gas well at 3,519-35 feet, rock pressure 750 pounds.

In Smith County, Gaither and others' No. 1 William Parker was shut down at 3,010 feet and the Gulf Production Co.'s No. 1 Mrs. Morgan, Moore Survey, was shut down at 527 feet.

"It is the process of education that both the public and the oil industry so much need at this stage to which the Federal Oil Conservation Board has devoted much of its energies, and the progress made encourages my faith that government and all industry can work together for the common weal."

Extract from the speech of Hon. Hubert Work Secretary of the Interior and Chairman of the Federal Oil Conservation Board, before the Mineral Law Section, American Bar Association, at Buffalo, August 30, 1927

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Earl	1	75
Hunick	1	542
McFarland	1	0
Noble	4	3,330
Peter	6	1,190
Sango	3	2,185
State	4	200
Strain	1	0
Independent:		
Bruner	4	2,275
Sullivan	4	202
Knapp	5	4,635
Gaines	2	8,385
O'Dell	4	280
Interocean:		
Payne	1	0
Magnolia:		
Bryant	5	2,084
Cowden	3	24
Edmundson	2	840
Holmsley	6	2,699
Ingram	1	30
Lena	3	341
Seay	5	2,313
Simpson	4	971
Sparks	7	4,617
Sullivan	2	2,028
Mid-Continent:		
McCumber	7	2,550
Mid-Kansas:		
Anderson	3	710
Phillips:		
Dunnaway	1	27
Graham	7	465
Prairie:		
Baker	1	45
Davis	4	1,700
Graham, C.	2	1,470
Graham, O.	4	4,035
Stidham	13	9,830
Shaffer:		
Clark	3	175
Roxana:		
Bayliss	1	17
Spencer	2	1,825
Sinclair:		
Foreman	1	15
Hollins	3	773
Sango	1	2,550
Skelly:		
Spencer	2	2,542
The Texas Company:		
Anderson	3	835
Brown	4	1,745
Rodgers	3	6,460
Wilmont	5	3,300
Tidal:		
Watkins	5	2,430
Twin State:		
Barker	4	335
Hearn	2	3,885
Total Earlsboro	257	164,085

Seminole

Carter:		
B. Carter	2	220
J. Carter	3	35
F. Carter	3	160
Creamer	2	25
R. Cudjo	4	450
W. Cudjo	2	15
Gilliland	2	400
Grisso, M.	1	0
Grisso, W.	6	1,000
Knapp	3	183
Killing, M.	12	9,020
Killing, G.	4	555
Lukes	7	1,700
Ponder	2	70
Simpson	3	142
S rother	4	720
Vierson	4	400
Jackson	1	110
Amerada:		
Fixico	4	1,140
Killing	4	545
Rentie	3	881
Atlantic:		
Cudjo, N.	3	660
Barnsdall:		
Carter	8	2,577
Henry	2	636
Jones	4	915
Empire:		
Gross	4	307
Wilson	3	312
Gypsy:		
Butler	3	410
Carter	8	1,055
Cudjo	5	535
Fixico	7	158
Harjo	8	1,225
Wolf	6	207
Independent:		
P. Fixico	3	295
Harjo	3	502
Independent and Garland:		
T. Fixico	8	1,048
Independent & Interocean:		
Jones	4	475
Indian Interritory:		
Allen	2	430
Bowlegs	12	2,802
Fleet	1	16
Gooden	4	196
Harjo	3	555
James	4	50
Reed	3	29
Kingwood:		
Johnson	3	1,210
Magnolia:		
Born	1	66
Franks	4	672
Mid-Continent:		
Rentie	9	1,120
Tayeche	7	350
Mid-Kansas:		
Pressley	1	5
Wilkins	2	350
Phillips:		
Strothers	2	150
Philmack:		
Butler	3	1,340
Prairie:		
Gross	5	80
Mason	1	125
Spencer	1	15
Strother	8	1,035
Pure:		
Strother, A.	17	2,963
Strother, B.	5	2,580
Strother, C.	1	138
Roxana:		
Harber	2	305
Lashley	2	58
Sinclair:		
Carter	2	30
Cudjo, A.	6	850
Cudjo, B.	4	975
Dicey	2	2,090
Fixico	4	850
Slick:		
Cudjo	3	654
Franks	8	1,247
Giblet, Sam	3	2,672
Tiger	1	51
Superior:		
Cudjo	4	894
The Texas Company:		
Mayhue	1	315
Strothers	2	110
Tidal:		
Carter	4	492
Fixico	6	566
Harjo, D.	3	720
Harjo, T.	6	250
Mahardy	2	218
Tayeche	2	24
Turman:		
Cudjo	4	933
Grisso	1	163
Jones	4	1,227
Total	324	61,068

Searight

Carter:		
Davis	7	2,435
Frazier	5	3,965
Kiker	1	30
Mandler	2	60
Scott	1	30
Amerada:		
Johnson	1	80
Strother	1	1,567
Gypsy:		
Cudjo	3	1,002
Mid-Continent:		
Grayson	6	860
Soloche	2	1,895
Prairie:		
Cannon	1	15
Carter	1	36
Houck	1	7
Kincaid	7	77
Wiemer	1	10
Pure:		
Aldridge	5	4,707
Roxana:		
Strother	2	1,497
Sinclair:		
Polly	4	2,965
Twin State:		
Varnum	2	717
Wilcox:		
Chupco	7	4,362
Total	60	26,315
Total Little River	69	42,160
Total Bowlegs	273	130,126
Total Earlsboro	257	164,085
Total Seminole	324	61,068
Total Searight	60	26,315
Grand total	983	423,754

Carter County

Magnolia Petroleum Corp. is building the rig for No. 1 J. C. Brooks, SW cor. NW NE, Section 11-2s-3w. The rig is being built for No. 1 C. E. Brooks, NW cor. SW NE Section 11-2s-3w. The rig for No. 2 C. E. Brooks, SW cor. NE Section 11-2s-3w, is also under construction.

Magnolia Petroleum Corp.'s No. 3 N. Hardin, SE cor. Section 18-1s-3w, has been completed at a total depth of 3,807 feet producing 32 bbls. from sand at 3,030-35 feet. Schermerhorn Oil Co. and others' No. 2 Lyles, NE cor. SE NW Section 11-2s-3w, drilled to 4,000 feet and is producing 225 bbls. from a series of sands at 3,132-3,903 feet. Skelly Oil Co.'s No. 1 Morris, SE cor. SW NE Section 21-2s-3w, is dry and abandoned at 2,755 feet.

Cotton County

Jenkins and others' rotary rig is up for No. 2 Smith, SW cor. SE SE Section 34-1s-10w.

Creek County

Twin State Oil Co. has moved the rig out for No. 3 Anthis, SW cor. NW NE Section 2-16-11. J. B. Grieves has built the rig for No. 4 Porter, SW cor. NW SE Section 12-19-8. Sinclair Oil & Gas Co. is cleaning out to deepen No. 9 Wacoche, SE cor. NE SW Section 20-18-7. Peters Petroleum Co.'s No. 4 Arysalle, NW cor. SE NW Section 21-16-8, is being cleaned out preparatory to deepening. J. W. Henry and others made location for No. 1 D. Talamase, NE cor. SW NW Section 7-15-7. Lima Oil Co. and Peters Petroleum Co. staked the location for No. 1 Grayson, NW cor. NE NE Section 11-14-7.

Carpenter and others' No. 4 Jackson, CWL NE SW Section 22-17-11, was deepened to the Wilcox sand at 2,514-23 feet and abandoned. The Texas Company's No. 2 Fulsom, NE cor. SE NE Section 23-17-10, is a 25-bbl. well in the Dutcher sand at 2,480-88 feet. J. H. Tahkaney's No. 23 Tahkaney, SW cor. NW NW Section 24-17-10, was completed for 45 bbls. in the Dutcher sand at 2,465-78 feet. Thompson & Black's No. 5 Wilson, NW cor. SE SW Section 16-17-11, is dry at 760 feet. Curtis Oil Co.'s No. 1-A Harris, NE cor. NW Section 27-17-11, is dry and abandoned in the Wilcox sand at 2,523-30 feet. Twin State Oil Co.'s No. 2 Anthis, NW cor. SW NE Section 2-16-11, was drilled to the Wilcox sand at 2,662-71 feet and made 75 bbls. after a shot. Turner & Turner's No. 5 Penoke, NW cor. SW SW Section 9-16-12, has been shut in for 1,000,000 feet of gas in the Glenn sand at 1,440-1515 feet. Sinclair Oil & Gas Co.'s No. 2 Long, SW cor. Section 9-18-7, was completed for 5 bbls. after drilling to 2,659 feet and plugging back to sand at 2,293-2,313 feet. Gray Oil Co.'s No. 1-A Beaver, NW cor. SE SW Section 20-15-8, had an initial production of 365 bbls. in the Dutcher sand at 3,285-91 feet.

Garfield County

Sinclair Oil & Gas Co.'s No. 12 Frickenschmidt, NE cor. SW NE SW Section 25-22-4w, drilled to 1,570 feet and made 41 bbls. after a shot in sand at 1,555-65 feet.

Grady County

Watchorn Oil & Gas Co. is rigging up rotary tools for No. 5 Pettitt, SE cor. Section 11-4-8w. Marland Oil Co. and Joe Ray's No. 2 Woods, NW cor. SE NE Section 17-3-5w, an old well plugged back to sand at 2,205-15 feet and is drilling plugs. Carter Oil Co. is erecting the rig for No. 3 Woods, SE cor. NW NE Section 17-3-5w. The rig is being built for No. 4 Scharmack, NE cor. SW SE Section 35-3-5w.

Carter Oil Co.'s No. 2 Nash, NE cor. Section 7-3-5w, was completed for 31 bbls. in sand at 2,112-19 feet. No. 3 R. Horton, NW cor. SE NW Section 8-3-5w, is making 25 bbls. from sand at 2,483-86 feet. Marland Oil Co.'s No. 4 Burke, SW cor. NW SW Section 16-3-5w, Carter-Knox Pool, has been completed for 52 bbls. in sand at 2,559-69 feet. Marland Oil Co. and Joe Ray's No. 3 Woods, NE cor. SE NE Section 17-3-5w, make 252 bbls. from sands at 2,268-71 feet and at 2,272-88 feet. Carter Oil Co.'s No. 2 Finch, NW cor. SW Section 22-3-5w, had sand at 1,732-37 feet, drilled to 1,742 feet and made 7 bbls. No. 1 Cochran, SW cor. NW NW Section 35-3-5w, has been abandoned at 2,744 feet. Nichols Drilling Co.'s No. 4 Chandler, SE cor. Section 27-5-8w, was completed for 10,000,000 feet of gas in sand at 2,035-2,376 feet.

Jefferson County

Ed Cox is building the rig for No. 1 Ryan, NE cor. SW Section 23-6s-6w.

Kay County

Comar Oil Co. has moved a machine to the location for No. 1½ Brown, NW cor. NE SE SE Section 16-29-1w. Marland Oil Co.'s No. 2 Dickerson, NW cor. NE SE Section 17-29-1, is rigging up to deepen from 2,347 feet. Greer and others are digging the cellar for No. 2 Lane, C NE NE Section 30-28-1. Location has been made for No. 3 Lane, C NW NE Section 30-28-1. Globe Oil & Refining Co.'s No. 1 Harris, SE cor. Section 8-27-1w, is being deepened below 3,492 feet and now fishing at 3,513 feet. Harris & Haun's No. 3 Brown, C SE SW Section 9-27-1w, Blackwell area, is rigging up to deepen below 3,435 feet. No. 4 Brown, C NW SW Section 9-27-1w, an old well, has been deepened from 3,462 feet to sand at 3,552-61 feet where a show of gas was had and is now shut down. George Manahan and others moved the rig out for No. 1 Williams, NW cor. SE Section 29-25-1w.

Comar Oil Co.'s No. 5 McCullough, NW cor. SE Section 5-28-1w, drilled to 3,592 feet where it has been abandoned. McComas and others' No. 1 Wolfe, NE cor. SW Section 6-28-1, drilled to 4,302 feet, plugged back to 3,345 feet and was abandoned.

Kingfisher County

Ramsey Brothers' No. 1 Pool, SE cor. Section 25-17-5w, has been plugged and abandoned at 4,507 feet.

Lincoln County

Flynn & Morgan made location for No. 1 Smith, SE cor. NE NW Section 27-17-5.

Logan County

Brown & Blevins' No. 1 Lovell, SW cor. NW Section 9-18-4w, has been abandoned at 4,719 feet.

Okfuskee County

Champlin Oil & Refining Co. has the rig up for No. 4 Washington, SW cor. NE SE Section 15-11-11, Deaner Field. The rig has been built for No. 7 Holmes, NW cor. NE NE Section 22-11-11. Riverland Oil Co.'s No. 1 M. Barnett, SW cor. SE SW Section 19-11-11, was deepened to the Wilcox sand 3,602-48 feet and made 1,065 bbls. Umburn and others' No. 1 Tiger, SW cor. SE SE Section 35-11-11, is shut in for 4,000,000 feet of gas in the Deaner sand at 2,508-15 feet. Rogers & Wilson's No. 1 M. Davis, SE cor. SW NE Section 5-10-10, is dry and abandoned at 4,142 feet.

Osage County

Peters Petroleum Co. made location for No. 9 SW cor. SE NW Section 17-27-6, Burbank Pool. Phillips Petroleum Co. is erecting the rig for No. 4 NW cor. SE SE Section 17-27-6. The rig is also being built for No. 5, NE cor. SE SE Section 17-27-6.

(Continued on Page 131)

NEW TOWNSITE DRILLING ACTIVITY IN LAMONT, GREENWOOD COUNTY, KANSAS

By J. L. Dwyer

Still another townsite drilling activity looms for Kansas in the Lamont townsite of Greenwood County. This city is situated in Section 25-22-13, and the discovery well was completed in the Bartlesville sand some months ago by John Rogers. Some disappointments were encountered, but the past week has additional production.

Darby Petroleum Co.'s No. 1 Schwab, in the NW of Section 30-22-13, has a hole full of oil in sand 1,690-1,747 feet, and is estimated at 200 bbls. daily. This well is directly across the railroad tracks from the discovery well. West of the discovery well, the Empire Gas & Fuel Co.'s No. 3 Demler, in Section 25-22-13, is swabbing 160 bbls. daily from sand 1,673-1,743 feet. These two wells are the important finds of the week in Kansas.

Butler County

Blankenship Petroleum Co.'s No. 1 Pyle, SW cor. NE Section 22-26-4, is spudding. Rosenthal and others' No. 1 Leon State Bank, SW cor. NE Section 3-27-6, is rigging up. Luette & Sheets' No. 1 Jones, SW cor. NE Section 30-28-7, is rigging up to deepen from 2,839 feet.

Cowley County

Doric Oil Co. has the rig up for No. 1 Graham, NW cor. SE Section 33-32-7. Manning and others built the rig for No. 1 Doughitt, NW cor. Section 17-33-3. Shawver and others' rig is up for No. 1 Vestal, SW cor. NE Section 19-34-3.

Dickinson County

D. I. Hall's No. 1 Dunlap, NE cor. SE NE Section 31-15-4, is dry and abandoned at 2,654 feet.

Elk County

Elk Petroleum Co. made location for No. 1 Mullendore, SW cor. NW SW Section 3-30-9. Elmwood Oil Co. and Phoenix Oil Co. moved a machine to the location for No. 1 Hawks, NW cor. Section 23-30-10. Landon and others' No. 1 Willard, NW cor. NE NW Section 3-30-12, is drilling at 400 feet.

Greenwood County

Darby Petroleum Co. has the rig up for No. 5 Fankhouser, SW cor. Section 24-22-12. Empire Oil & Refining Co. has the rig on the ground for No. 5 Ott, NE cor. Section 26-22-12. Davis and others' rig is being built for No. 1 Wengler, on school lot, Lamont Townsite, Section 30-22-13. Kanson Oil Corp. made location for No. 1 Lamont Townsite, NE cor. NW NW Section 30-22-13. McCullough and others' machine is at the location for No. 2 Perrie, NW cor. Section 30-22-13. McGinnis and others made location for No. 5 Green, SE cor. SW SW Section 11-23-9. Murphy and others built the rig for No. 5 Green, NE cor. NW NW Section 14-23-9. Empire Oil & Refining Co.'s No. 1 Roglin, NW cor. NE Section 15-25-13, is spudding. Flintridge Petroleum Co.'s No. 4 Weirshing, C SW SW Section 23-26-9, is rigging up. Mohawk Oil Co.'s No. 1 Cross, SE cor. NW NE Section 7-27-11, is drilling at 750 feet.

Transcontinental Oil Co.'s No. 1 Pixlee, NE cor. Section 10-22-10, was completed

(Continued on Page 100)

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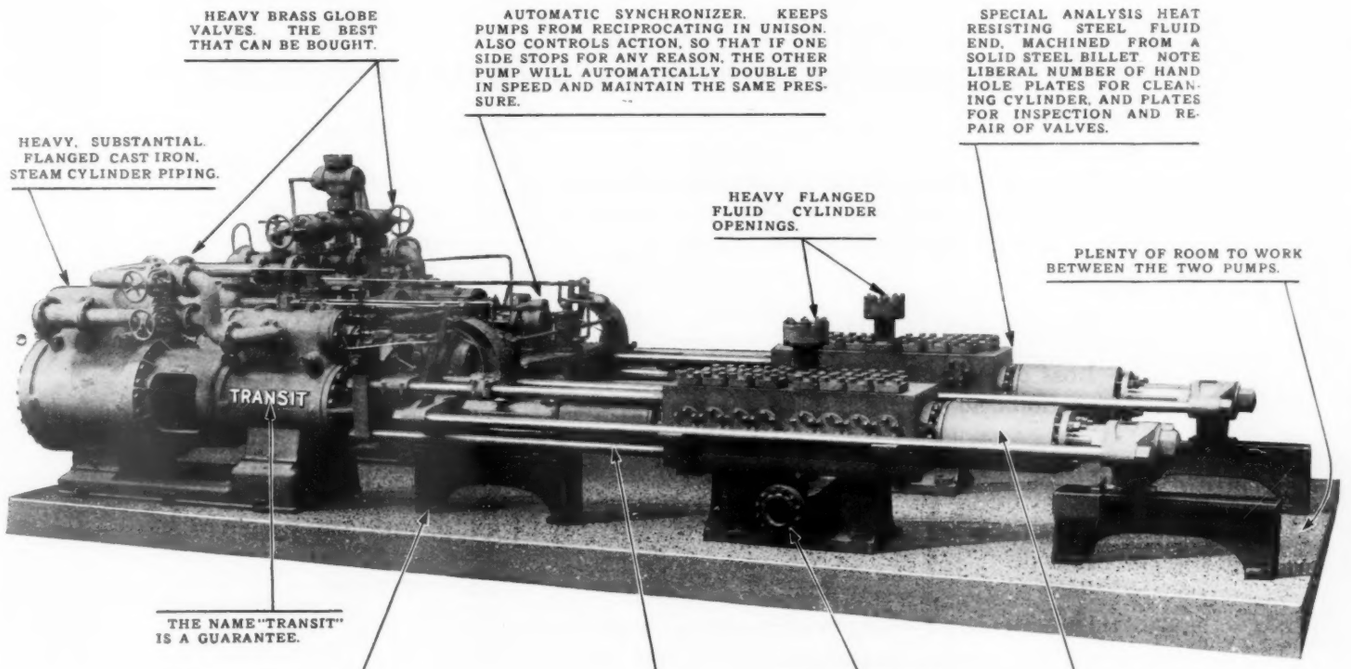
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Bulletin No. 4

800% PROFIT BASED ON A

Operating Cost and Profit Due to Direct Vapor Ph

ACID TREATING 1000 BARRELS OF CRACKED GASOLINE

	Cost per barrel	
Direct Labor—General Supervision—Repairs — Acid — Soda — Water — Steam — Electric light, power, etc. Total	$.09135	
Cost per 1000 barrels		$ 91.35
Loss of 4% due to Treating and Polymerization. 40 barrels at $3.36		134.40

COST OF RERUNNING 1000 BARRELS LESS 40 OR 960 BARRELS

	Cost per barrel	
Direct Labor—Supervision—Repairs—Store Expenses—Fuel expense—oil and gas—Water—Steam—Electric light and power —Miscellaneous. Total	$.069695	
Cost per 960 barrels		$ 66.91
Loss of 4% due to rerunning. .04 x 960 = 38.4 barrels at $3.36		$129.02
Total Cost Treating and Redistilling 1000 barrels of gasoline		$421.68

Note: The figures given above are actual operating costs obtained from a representative refinery and are based on a gasoline price of $.08 per gallon.

If you are a refiner or petroleum technologist interested in the subject, write for our bulletin "Vapor Phase Refining."

ACTUAL OPERATING

Phase Refining as Compared With Acid Treating

VAPOR PHASE REFINING 1000 BARRELS OF CRACKED GASOLINE

	Cost per 1000 Bbls.		
	Clay recovered Per ton	Clay used once and discarded	
Transporting clay, steaming out the Polymerizers, discharging and recharging	$ 3.00	$ 3.00	
Roasting Clay	1.00		
Clay Loss and Depreciation	1.00	15.00	
Loss on treating—none			
Rerunning dispensed with, therefore, no loss			
Royalty 1000 barrels at 6c per barrel	60.00	60.00	
Total Cost Vapor Phase Refining 1000 barrels	$ 65.00	$ 78.00	
Total cost acid treating and redistilling 1000 barrels brought forward	421.68	421.68	
Net Profit due to Vapor Phase Refining 1000 barrels based on recovering clay	356.68		
Net profit per barrel recovering clay			.35668
Net profit due to Vapor Phase Refining 1000 barrels based on using clay once and discarding		343.68	
Net profit per barrel using clay once only			.34368

Taking $350.00 as an average figure, or 35c per barrel, one Tower handling 1000 barrels per day at an approximate installation cost of $12,000 would yield over a year of 300 days, more than $100,000, or 800% on the investment.

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PATENTS PENDING

Dale Field May Have Reached Peak

Newest Productive Area in Southwest Texas Disappointment Compared With Lytton Springs, 5 Miles Northwest

By B. D. Stevenson
Staff Corresondent, Southwest Texas Fields

SAN ANTONIO, Tex., Nov. 14.—Dale Field had in October, the third month it had been on production, a daily average of 385 bbls. from nine producing wells. The field is the newest in Southwest Texas and is producing from Serpentine at around 2,000 feet, but it has been a disappointment as compared with Lytton Springs, 5 miles northwest, in that the field has been irregular, the initial production less and it looks as though it will be very small. There may be a few more productive locations, but unless production is picked up in some unexpected quarter the field has almost reached its limits as it is.

There are 10 producers in the field, Morgan's No. 1 Osteen making an average of 14 bbls. a day, but it was not reported in the pipe line runs. Another small well has been completed since. Otherwise the record for October was as follows:

Company, Lease	No. of wells	Bbls. daily average
Texas, Beatty (A)	2	180
Texas, Lackey	1	45
Texas-Humble, Clingensmith	3	110
Humble, Clingensmith	2	15
Sun, Talley	1	35
Totals	9	385

Three completions in the Refugio gas field in Refugio County to the new 3,300-foot sand, all heavy gas producers, make a total of five now producing in that horizon. Coast Gas Co.'s No. 3 Ryals is a 40,000,000-foot gasser and the Houston Oil Co.'s No. 6 Fannie Heard and the Houston Gulf Gas Co.'s No. 2 Moody are each 60,000,000-foot wells and they all have rock pressure of around 1,250 to 1,300 pounds.

The No. 6 Shelly, the discovery well, found the pay at 3,305 feet. The No. 3 Ryals at 3,224 feet, is the shallowest in that sand and the No. 2 Moody at 3,425 feet, the deepest. Separators have been installed in the No. 6 and No. 4 Shelly and each is making about 10 bbls. of oil. The three other wells are making dry gas thus far.

Two Wells Extend Field

In the Laredo territory proven fields the completions are without special interest except in the case of two wells that have extended the fields somewhat. R. M. Strum's No. 1 Lopez in the southern part of Webb County, close to the Zapata County line in Survey 309, and 1,000 feet from the northwest corner and 250 feet from the north line, is a 1,000,000-foot gas well spraying oil in sand at 1,627-39 feet. It is in a territory described as the Andrews Pool and between the original Mirando Valley discovery oil pool of the district on the south and the Aviator or Bruni extension on the north. Only gas has been found thus far in the Andrews Pool and the Strum well is to the west of these gas wells. It may lead to picking up the line of production on south from the Aviators.

The other well is in Zapata County, it is the O. W. Killam No. 2 R. Hinnant in Survey 74, 4 miles due south of the Mirando Valley Pool and 1,340 feet from the west line and 2,800 feet from the south line of Survey 74. The Jennings gas field is a few miles southwest. Killam's well in sand at 1,590-1,600 feet and total depth 1,705 feet, is a 10,000,000-foot gas well. There are two dry holes between it and the Jennings Field.

Kept Rigs Running

While there has been a minimum of drilling in proven fields in Southwest Texas during the depressed conditions of the industry the Schimmel Production Corp. of Fort Worth, has been keeping rigs running in the eastern part of the Somerset Field, where the company has extended the field and has brought in average sized producers. The depth is around 1,300 to 1,400 feet.

Schimmel first extended the field to the northeast by getting production on the Ernest and H. & W. Koehler leases just in advance of production of the field. Then the company jumped three-quarters of a mile or more to the northeast and got production on the Julius and Oscar Koehler leases. Between this production and that on the Ernst lease and H. & W. Koehler lease the company has 200 acres on the Johanna Munk lease besides some other leases that have not been drilled, and recently purchased the H. C. Gayle lease from G. E. Ginter, who had drilled two wells on it, proving up some additional territory.

Schimmel now has the bulk of the acreage over to the South Medina Field on the Swearingen lease about another mile farther to the east and northeast, with probability that the Somerset Pool will ultimately merge with that on the Swearingen lease. Schimmel has consolidated all his operations in Somerset under the Schimmel Production Corp. Formerly part of it was handled by the Associated Petroleum Co.

Somerset is the oldest pool in Southwest Texas. Oil was discovered there in 1909. Four or five deep tests thus far have not disclosed any production below the present producing horizon, but there are to be other deep tests. One such test at the southwest end of the field is held up by a lawsuit. The east end has not been tested for deep oil and eventually some deep tests there are inevitable.

Caldwell County Completions

Magnolia Petroleum Co.'s No. 18 Rios, at 2,086 feet, 25 bbls. in Luling Field.

Humble Oil & Refining Co.'s No. 4 Clingensmith, Dale Field, at 2,215 feet, 20 bbls.

Refugio County

Houston Gulf Gas Co. and William F. Morgan's No. 4 Shelly, at 3,311-20 feet, 50,000,000 feet gas and approximately 10 bbls oil.

Houston Gulf Gas Co. and Coast Gas Co.'s No. 3 Ryals, deepened from shallower sand to 3,224 feet, 40,000,000 feet of gas.

Houston Oil Co.'s No. 6 Fannie Heard, deepened from shallower sand to 3,300 feet, 60,000,000 feet of gas.

Houston Gulf Gas Co.'s No. 2 Moody, at 3,425 feet, 60,000,000 feet of gas.

San Patricio County

Houston Oil Co.'s No. 2 Humble, Roos Survey, Block 7, at 2,318 feet 50,000,000 feet of gas.

Webb County

R. M. Strun's No. 1 Lopez, at 1,627-39 feet, 1,000,000 feet gas and spraying a little oil.

Duval County

Houston Oil Co.'s No. 1 Servando Benavides in Cole gas field on The Texas Company's lease at 1,564-69 feet, 30,000,000 feet of gas.

Zapata County

O. W. Killam's No. 1 Hinnant, Survey 74, at 1,590-1,600 feet, 10,0000,00 feet of gas. This well is in new territory.

Abandonments

In Caldwell County, Humble Oil & Refining Co. abandoned No. 3 Clingensmith at 2,656 feet.

In Gonzales County the Bristol Oil & Gas Co. abandoned the No. 2 Denman in the A. Zumwalt Survey at 1,000 feet.

In Val Verde County the A. Blume test at 2,767 feet on the Moore estate which has been standing at that depth for some time has been abandoned.

New Locations

In Duval County, E. H. Buckner has made location for the No. 1 Benavides in the M. Arispe grant, 626 feet from the northeast line and 694 feet from the southeast line.

In Atascosa County, D. C. Holmes has spudded in and is drilling the No. 1 Shaw a little south of the central part of the Somerset Field and outside the proven acreage.

In DeWitt County, H. T. Roe has made location for the No. 1 A. F. Lienhard in the southwest corner of the D. J. Bibb Survey.

In LaSalle County, Sun Oil Co. on the Washburn ranch has made location and is rigging up on Survey 157 for the No. 1 Washburn, 3,500 feet from the north line and 3,400 feet from the west line and near the McMullen County line.

In the Kleberg County Field, Houston Oil Co. has made location for its No. 3 Kissman.

In Medina County, Pioneer Oil & Refining Co. has made location in the west part of the Adams gas field for No. 1 Adams in Block 1 of the subdivision of S. C. Durst Survey No. 13, the location being 300 feet from the south and east lines of the block.

Cole Gas Field—Duval

O. W. Killam's No. 8 R. Benavides, Survey 11, Block 6, located 585 feet to northwest and 150 feet to southwest lines, has sand at 3,300 feet and is testing; No. 3 Bruni, Survey 585, located 2,140 feet to east lines and 150 feet to north line, is ready to spud in. Houston Oil Co.'s No. A-2 Bruni, Survey 10, Block 48, located 200 feet to northwest lines and 150 feet to northeast lines, is drilling at 1,800 feet. Houston Oil Co. (Texas) No. 1 Benavides, corners of Blocks 339-340-341-342, has sand at 1,564-69 feet. Cole Petroleum Co.'s No. 50 Benavides, Survey 5, Block 7, located in the Cuellar grant, is drilling at 141 feet.

Piedras Pintas Dome

Humble Oil & Refining Co.'s No. 7 Walsh, Survey 185, located 2,050 feet to east line and 1,750 feet to north line, has sand at 3,821-25 feet and is testing.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 31 Merchants State Bank, Survey 415, located 1,240 feet to west line and 2,025 feet to north line, is moving on.

Alworth Pool

Alworth-Stevens-Hild's No. 22 M. Garza, Survey 39, Block 6, located 1,150 feet to southwest lines and 1,410 feet to southeast lines, is drilling at 600 feet; No. M. Garza is a location in Survey 39, Block 5, number not yet announced.

Albercas Field—Webb

O. W. Killam's No. 7 Bruni, Block 65, located 1,050 feet to east lines and 150 feet to north line, is testing sand at 2,205 feet.

Andrews Pool

R. M. Strum's No. 1 Lopez, Survey 309, located 1,000 feet to NW cor. and 250 feet to north line at 1,627-39 feet, is

(Continued on Page 121)

SCHLESSINGER WILDCAT IN DUVAL COUNTY WATCHED WITH INTEREST

By B. D. Stevenson

SAN ANTONIO, Tex., No. 14—Schlessinger Oil Corp.'s No. 1-A Moody in Section 60, in the northwestern part of Duval County and up the Reynosa escarpment 25 miles from the Carolina-Texas gas and oil field, failed to make enough of a well in 11 feet of sand at total depth of 2,401 feet and it drilled through gumbo to 2,446 feet and went into another sand. Casing was set for the test at 2,401 feet.

The sand at 2,446 feet looked better than the other and a drill stem test was to be made in the new sand, results of which are not yet available. The well has attracted a great deal of attention because of its position on the escarpment and showings of oil in other wells in that area.

In Milam County there are indications of new production 2 miles east of the Minerva end of the Rockdale-Minerva Field on the J. S. Jacob farm. J. W. Kemp and associates drilled the well and the usual Minerva sand below the green marker sand was not picked up, but at 1,100 feet, 100 feet or so deeper, it is in a sand with slightly lower gravity oil. Some difficulty is being experienced in completing the well and it is not in the producer class yet, but holds out hopes. If this well fails of completion owing to the mechanical difficulties the derrick will be skidded and another well drilled.

Well May Be Saved

The Driscoll well, on the Driscoll ranch in Duval County, half way between the Cole Field on the southwest and the Piedras Pintas Field on the northeast, drilled for water by Robert Driscoll, owner of the ranch, has been lubricated and mudded off and may be saved. It made a lot of gas—several million feet—and sprayed some oil.

One of the important things about this well is the fact that it is due north of the L. M. Holden wells in Jim Hogg County on the Jones ranch which, while they failed of completion, had some gas and oil and of chief importance had more sand than producers in the Mirando district 15 miles west. Geologists have been giving this additional thickness of sand some attnetion.

If a producer is found along that line it is quite possible it will be considerably bigger than anything in the Mirando district. There are four or more lines of production in the Mirando territory, all running north and south. First to the west is the old Riser gas field and Jennings gas field. Next the Mirando-Aviator-Schott line of production. Next east the Cole-O'Hern & Seacord line and next east of that, though there is no production on it, the Holden-Driscoll line. Holden is drilling his third well and hopes to pick up the production. National Oil Co. has spudded in and set surface casing on the No. 1 Ball, 6 miles east of the Driscoll well, but close enough to cause the well to be watched.

I. N. Boicourt is starting a well on the Mexican side of the Rio Grande a few miles up the river from Piedras Negras which is on the other side of the river from Eagle Pass in Maverick County. Boicourt drilled 20 wells in the northwestern part of Maverick County from Darling southwest to the river and is said to have found a displacement of as much as 1,000 feet. Also he found the formations in that part of the county much thickened up.

Believes Major Fault Line Found

Boicourt believes he has found a major fault line and the most important one between Tampico and the Mexia Field and his well on the Mexican side is to be drilled close to some exposures to

(Continued on Page 121)

GRAY TREATING TOWERS

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Further Test for Champagnolle Area

Continued Good Results in Prospecting for Deeper Formation in Pine Island District in Caddo Parish

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Nov. 14.—Ohio Oil Co.'s test of No. 2 Crain, Section 1-17-14, Champagnolle district of Union County, Arkansas, as a salt water hole, and an oil show on test of Garrett-Modisette Drilling Co.'s No. 1 Gregory in Section 10-17-14, between 2 and 3 miles southwest, both developing late in the week, shadowed all other results from drilling in the Shreveport territory save continued good results from prospecting a deeper formation more resembling a true sand condition in Pine Island area of Caddo Parish than anything yet found in the Trinity horizon in that pool. The completions record was somewhat under last week's results, there being 14 completions against 29 last week, with 17 wels waiting on standard rig, 10 standing temporarily abandoned, 152 drilling, 13 rigging up, 29 derricks and 13 locations. Last week 10 wells were waiting on standard rig, 10 were standing temporarily abandoned, 155 drilling, 13 rigging up, 32 derricks and 8 locations. Production, daily average runs from the field, was practically stationary, the difference being a gain of 145 bbls.

Ohio Oil Co. finished drilling plug late in the week after cement 4½-inch casing in No. 2 Crain, Section 1-14-17, Union County, Arkansas, to shut off salt water from a leaky 6-inch seat at 3,013 feet and is cementing the hole to abandon after a similar test. The well was bailed in the second time, making an estimated 15,000,000 feet of gas with a spray of salt water during the first 30 minutes. Turned into tanks through separator, it flowed at the rate of 500 bbls. of salt water for two hours and is abandoned.

Garrett-Modisette Drilling Co., while this was going on, was making a test of No. 1 Gregory in Section 10-17-14 at 2,779 feet, from which oil filled up the drill stem for four fourbles, but the virtue of the formation from which it was obtained as a dependable producing stratum is doubted. It appears to be altogether a stray formation as Rovenger Oil Corp.'s No. 1 McCain, in Section 4-17-14, just northwest, paid off as the discovery well at 2,834 feet and production in the Champagnolle district up to present has been obtained at around 3,014 feet. However, there has not been enough drilling in that vicinity to determine whether Garrett-Modisette's well is higher up on the same structure or whether they have hit a stray oil-bearing formation. The net result of the Ohio's failure and Garrett-Modisette's showing will be a more thorough prospecting of that area, even though most of the acreage is on the hands of a very few operators and they in position where they don't have to drill unless it is a few offsets.

Deeper Producing Stratum

The Texas Company's No. 6 A. Herndon, as a 500-bbl. producer at 3,935 feet with 39 feet of broken sand, further emphasized this deeper producing stratum of the Trinity horizon in Pine Island. Most of the recent completions in this horizon have been in this formation. The Texas Company's No. 42 Caddo Mineral Lands in Section 23-21-15 was the first and those following it have all paid off well in initial production and appear to be holding up much better than completions in the shell-lime formation—known locally as the oolithic lime—between 200 and 300 feet above. The Texas Company's No. 6 A. Herndon, incidentally, was Caddo's only successful completion this week, the other being Greenwood Production Co.'s No. 1 McCutchen in Section 15-17-16, a failure at 3,010 feet as an extension of the Greenwood gas area.

Other completions in proven districts of the Shreveport territory were Consolidated Carbon Co.'s No. 1 Perry in Section 14-20-4e, Morehouse Parish, in the Monroe gas field, which was abandoned at 370 feet on account of an artesian flow.

The Texas Company put No. 36-B Brinkerhoff, Section 30-13-10, in the old Bull Bayou district, on the beam with an initial production of 17 bbls. from 2,538 feet.

Eddy Jones tested salt water at 2,522 feet in No. 11 Murphy, Section 17-16-15, Union County, Arkansas, and abandoned this Smackover test. Keen & Woolf's No. 4 Murphy, Section 9-16-15, Union County, a 3,000,000-foot gasser at 2,650 feet on March 17 this year, was a dry hole on second completion at 2,766 feet.

Marine Oil Co. completed No. 14 Snyder, Section 34-15-15, Ouachita County, in the Hays City Pool of Smackover, as a 150-bbl. well, 20 per cent salt water, in 5 feet of sand from 2,350-55 feet.

In east Texas, Cranfill & Reynolds abandoned No. 1 A. Mays in the Jane Thorpe Survey, Panola County, as a dry hole at 1,981 feet. Magnolia Petroleum Co.'s No. 11 Steele in the B. C. Jordan Survey was completed at 976 feet with 2,562,000 feet of gas, 350 pounds rock pressure.

Production Report

Daily average runs from the field were practically at a level with last week's, total runs from the Shreveport territory being 149,185 bbls. compared to 149,040 last week. North Louisiana pools shipped 50,050 bb'ls. compared to 49,935, and the Arkansas pools accounted for 99,135 compared to 99,105. These figures show an increase of 145 bbls. for the entire territory and a gain of 115 bbls. in north Louisiana and 30 in Arkansas.

Daily average runs from the field for the several pools this week and the week before were the following:

	Nov. 12	Nov. 5
Caddo light	13,075	12,170
Caddo heavy	4,345	4,725
Homer	4,710	4,730
Haynesville	6,935	7,160
De Soto-Red River	4,000	3,715
Elm Grove	685	660
Bellevue	1,040	1,210
Cotton Valley	5,100	5,150
Urania	9,115	9,165
Pleasant Hill	1,045	1,250
Totals, Louisiana	50,050	49,935
El Dorado	6,020	6,115
Smackover, light	9,820	9,535
Smackover, heavy	75,345	76,225
Stephens	1,175	1,205
Nevada County	3,950	3,025
Lisbon	2,725	2,895
Bradley	100	105
Totals, Arkansas	99,135	99,105
Both states	149,185	149,040

NORTH LOUISIANA

Bossier Parish

Carterville district—Bahan & Davis' No. 1 Dodson, Section 15-23-12, is drilling at 2,926 feet. Magnolia Pteroleum Co. began drilling No. 1 D. W. Roberson, Section 26-23-12, November 5, set 13⅜-inch surface string at 455 feet and is waiting for 8¼-inch to set after cementing at 3,069 feet in No. 1 Zula Roberson in Section 23-23-12.

O'Brien Brothers are drilling No. 1 Dodson, Section 22-23-12, at 2,200 feet and Woodley & Collins' No. 3 L. & A. in Section 15-23-12, is down 2,830 feet.

Bellevue district—R. L. Crook's No. 8 Larkin, Section 14-19-11, tested last week and estimated good for 5 bbls., is still waiting on standard rig, total depth 396 feet. Humble Oil & Refining Co.'s deep test, No. 30 Bliss & Wetherbee, Section 15-19-11, is reaming to bottom at 4,424 feet.

Elm Grove and Sligo—J. S. McCullough is setting 6-inch at 1,568 feet in No. 4 Hodges, Section 25-16-12. R. O. Roy's No. 1 Werner, Section 7-17-11, is still a derrick. Sligo Syndicate set 8⅝-inch casing at 1,694 feet in No. 2 Smith, Section 24-17-12, but found a leak on bailing and is arranging to set 4½-inch at 1,698 feet.

Caddo Parish

Pine Island—Arkansas Fuel Oil Co. set 5⅜-inch casing with packer at 3,830 feet in No. 2 Bashara, Section 23-21-15, preparatory to testing 30 feet of broken sand and shale, 3,870-3,900 feet. Arkansas Natural Gas Co. is underreaming No. 1 C. W. Lane, Section 13-21-15, total depth 3,865 feet; No. 2 on the same lease is temporarily abandoned at 3,742 feet. J. W. Burton's No. 8 Caldwell, Section 16-21-15, is still a derrick. Bussa & McGoldrick bailed No. 7 J. D. Bickham, Section 23-21-15, at 1,604 feet and are waiting on standard rig.

Dixie Oil Co. has cemented 8-inch at 2,565 feet in No. 9 Clark, Section 14-21-15; No. 9 Caddo Mineral Lands, Section 23-21-15, is drilling lime at 2,770 feet; No. 91 Dillon, 14-21-15, is a derrick; No. 92 Dillon, Section 13-21-15, is rigging up and No. 4 H. H. Huckaby, Section 11-21-15, has 8-inch cemented at 2,365 feet. Falcon Drilling Co. has been shut down waiting orders for a month after testing a broken sand at 2,281-92 feet in No. 1 Schmidt, Section 27-20-15. Haynes Brothers' No. 2 Spell, Section 15-21-15, has gone through a cavity at 2,940-43 feet where it lost returns and is drilling at 3,093 feet. Magnolia Petroleum Co.'s No. 8-A Hampton, Section 15-21-15, is drilling shale at 3,286 feet; No. 21 Robertshaw, Section 23-15-21, passed up 4,000,000 feet of gas at 3,681 feet and 22,000,000 feet at 3,607 feet, showed for production at 3,698 feet and will be equipped with air lift; No. 22 on the same lease is in lime at 2,143 feet. Ohio Oil Co. is nearing 5,000 feet in No. 25 E. K. Smith, Section 12-21-15, drilling lime at 4,974 feet, a depth reached by few tests in this locality of the territory. Palmer Corp.'s No. 1 Sellington, Section 17-21-14, is testing 6-inch casing cemented at 3,594 feet. The Texas Company's No. 49 Caddo Mineral Lands, Section 23-21-15, is drilling shale at 3,885 feet. No. 50 is in lime at 3,743 feet and No. 51 put on the air at 3,935 feet making 75 bbls. of oil and 300 bbls. of salt water, is shut down waiting orders. No. 10 J. K. Herold, Section 14-21-15, is drilling 8¼-inch plug at 3,648 feet. No. 10 Mabry, Section 15-21-15, is temporarily abandoned at 3,690 feet after trying to mill out 4½-inch liner. No. 14-B Noel, Section 14-21-15, was put on the air for 40 bbls. of oil and 300 bbls. of salt water, and is shut down at 3,050 feet waiting orders. No. 19 D. H. Raines, Section 15-21-15, got a small show in 10 feet of sand 3,986-96 feet and is drilling shale at 3,997 feet.

Greenwood—Belchic & Laskey have cemented 6-inch at 890 feet in No. 3 R. T. Sharp, Section 10-18-16. W. H. Cross began drilling No. 1 State Line Hunting & Fishing Club, Section 17-17-16, November 4, set 12½-inch at 61 feet and is drilling at 500 feet. Magnolia Petroleum Co.'s No. 1 J. W. Furrh, Section 28-18-16, is coring green sand at 1,870 feet and No. 1 John Furrh, Section 32-18-16, is in gumbo at 1,800 feet. State Line Oil & Gas Co. has rig up on No. 1 Amanda Sharp, Section 22-18-16.

Miscellaneous—Greenwood Production Co. has derrick pattern on location for No. 1 Cooper & Ellerbe, a wildcat 2,640 feet north and 1,072 feet east of the SW cor., Section 15-18-14, 4 miles north and across Cross Lake from Shreveport, Ohio

(Continued on Page 94)

WILDCATTING CAMPAIGN INDICATED AFTER THE FIRST OF THE NEW YEAR

By D. H. Bancroft

SHREVEPORT, La., Nov. 14.—Further strengthening the impression that there will be a more or less general indulgence in wildcatting in North Louisiana, Arkansas and East Texas territory after the first of the year, contingent, of course, on continued decrease in Seminole, appears indicated in rumors of plans under way by several of the larger independent corporate interests located here and in the activities of individual lease men and operators. Things have gone far enough in the first instance to release the fact that the Gulf Refining Co. has taken another large block north of what it already had in Richland proven area and south of Monroe production which it plans to develop during the winter. Another index is that S. P. Borden and associates have blocked considerable acreage just west of Pleasant Hill production in Sabine Parish and are arranging for immediate drilling, while still another is the geophysical work being done in several East Texas counties.

Added to these is the exploratory work already under way in northeastern Union County, Arkansas, where, with commercial production already obtained, the fact that most of the acreage is in the hands of two or three major companies will not prevent independent wildcatting. The failure of the Lawson-Urbana district, 12 miles south, to develop commercially, and one or two recent and as many older rank wildcats, has only added zest to the search for new production in Arkansas which would have been conducted much more vigorously except for the influence of Seminole and West Texas.

Richland Parish

Gulf Refining Co. is moving a heavy rig to location for No. 1 Millsaps in the northwest corner of the northeast of Section 8-17-6e, Richland Parish, about 6 miles north of nearest production, and is prepared to make a 5,000-foot test in the event a commercial well is not finished at the regular level around 2,400-2,500 feet. Richland gas has a high gasoline content.

Looking at the Richland situation from the other side of the picture, there is the failure of Moody & Seagraves' No. 1 Jones in the southwest corner of Section 15-18-7, about 8 miles northeast of the Gulf's Millsaps and 12 to 14 miles northeast of the nearest production. This well, about 10 days ago, was looking as if it might pay off at around 2,350 feet, but it was abandoned November 10 as a dry hole at 2,856 feet without furnishing any more encouragement.

The Benson district in DeSoto Parish, 10 miles south of Mansfield and about 12 miles north of Pleasant Hill production, offers another fertile field for the wildcatter as commercial gas and at least a showing of commercial oil was obtained there five or six years ago, and but for the sudden appearance of El Dorado and Haynesville, and after them Smackover, would have not been neglected as it has. One well in Benson is already well on its way toward completion and another 3 miles southwest is, by this time drilling, having been reported November 10 as rigging up.

Wildcat territory in Sabine Parish south of Pleasant Hill should be heard from within 10 days, L. M. Emlet having two 500-bbl. tanks up, flow line laid and all other preparations made for a suc-

(Continued on Page 98)

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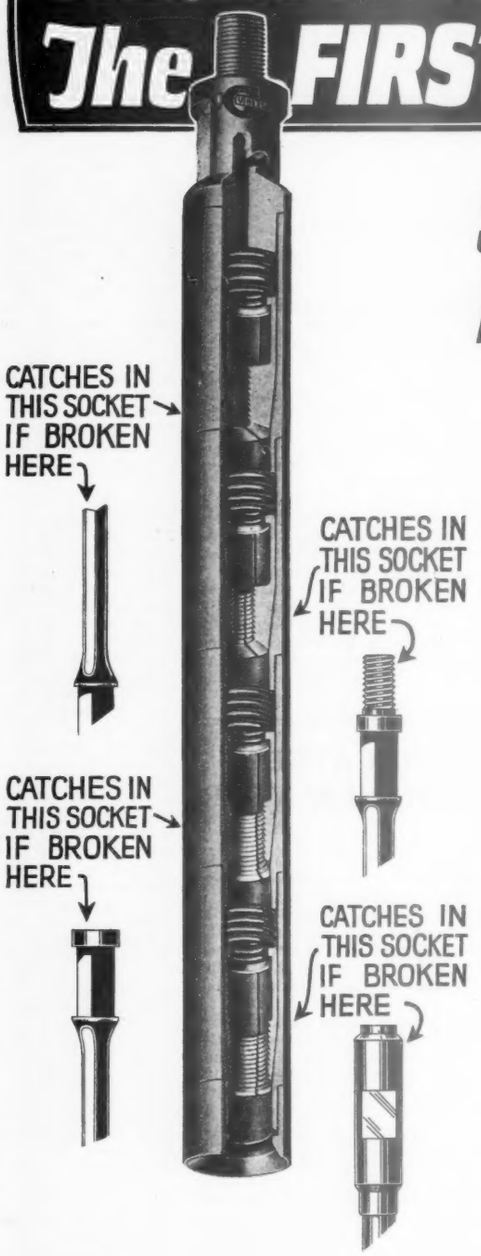
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Blue Ridge Leads Coastal Completions

East Hackberry Dome in Louisiana Attracting the Most Attention. Believed Opening of Important Field

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Nov. 14.—Blue Ridge of Fort Bend County, Texas, produced the Gulf Coast's biggest well of the week when Gulf Production Co.'s No. 12 West Schenck was brought in flowing at the rate of 1,328 bbls. of 22.5 gravity oil from a sand at 3,760 feet. This well, however, was small compared to others which have been completed in this territory in recent weeks and on the whole operations in the Gulf Coast were more or less routine.

The Louisiana coastal territory failed to add any new production other than a small gas well at Edgerly, Calcasieu Parish but operators generally are watching that state's next major development following the completion a week ago of Calcasieu Oil Co.'s No. 2 Caldwell on East Hackberry Dome in Cameron Parish.

It is general opinion here that another important field has been opened by that well, which came in flowing 1,000 bbls. of 22 gravity pipe line oil through a three-eighths-inch choke. However, it is not likely, according to Harry C. Hanszen, president of the Calcasieu Oil Co., that there will be any rapid development in that district at this time. The Calcasieu Oil Co., the Magnolia Petroleum Co., and the Union Sulphur Co., own jointly the 2,500-acre block on which the well is located and under this control no more drilling than necessary will be done. No new locations so far have been made in that district.

Only approximately 3,050 bbls. of new production was added to the Gulf Coast through completions of the past week. Gulf Production Co. brought in a good well at Pierce Junction, south of Houston in Harris County. This was No. 19 Taylor, making 700 bbls. daily of 40.5 gravity oil from sand at 4,486 feet. The Gulf company also got another good well in Jefferson County, its No. 11 Marrs-McLean flowing 1,000 bbls. but of which approximately 23 per cent is water and sediment. The latter well is a deep test, its production coming from a total depth of 5,400 feet.

New Drilling

Each of the bigger wells mentioned, the one in Blue Hill, one in Pierce Junction and the third in Jefferson County, has stimulated some new drilling in each of those districts, and, in addition, a number of old wells are being deepened. In Blue Ridge there are four actively drilling tests, three old wells are to be deepened at once and rigs are up or locations staked for five other tests. Blue Ridge is one of the most active spots in the Gulf Coast territory, along with Pierce Junccion.

Another well also was completed at Blue Ridge during the week, this being Gulf Production Co.'s No. 16-C Bassett Blakely flowing 45 bbls. from a depth of 2,972 feet. While the well is not large, the oil tests 40.5 gravity. Jefferson County was given a small pumper as was the Batson Field in Hardin County. The Hull Field of Liberty County yielded two small pumpers and the Orange district one. The latter was an old well deepened to 4,203 feet.

Five tests in the Texas Coastal territory and two in Louisiana were abandoned during the week. Two of these were at Long Point, Fort Bend Couunty, one at Nash Dome, Fort Bend County, one in Houston County, one in Colorado County, one in Iberia Parish and the last at Hackberry, Cameron Parish. The latter was Yount Lee Oil Co.'s No. 5 State which had been drilled to a total depth of 5,350 feet.

As in most other districts of the country, the low prices of crude have resulted in a tendency toward curtailment of operations in the Gulf Coast district and the past week's operations were generally in line with this trend.

Production in the coastal district declined 3,913 bbls. in the daily average. Small drops also were reflected in East Central and Southwestern Texas fields. The coastal decline was due largely to Spindletop, whose daily average production the past week was 51,318 bbls. as against 54,116 bbls. of the previous week. Estimated daily average production for the three districts for the week ending November 12 was:

GULF COAST—TEXAS

Spindletop	51,318
Saratoga	1,082
Batson	1,268
Goose Creek	7,866
Sour Lake	4,020
Hull	15,281
Big Creek	3,174
Columbia	9,171
Humble	4,561
Pierce Junction	9,873
Blue Ridge	4,607
Markham	260
Orange	4,438
Damon Mound	785
South Dayton	495
South Liberty	2,123
High Island	33
Moores Field	36
Boling	2,287
Nash Dome	1,390
Barbers Hill	900
Vinton	4,960
Starks	432
Edgerly	2,206
Evangeline	1,303
Lockport	5,174
Sulphur	500
Total this week	139,543
Total last week	143,323
Decrease	3,780

East Central

Mexia	9,080
Cedar Creek	1,295
Nigger Creek	1,600
Currie	576
Wortham	2,505
Richland	690
Powell	13,831
Total this week	29,577
Total last week	29,634
Decrease	57

Southwest

Somerset	2,360
Lytton Springs	1,715
Dale	455
Luling	14,969
Miscellaneous	9,096
Total this week	28,595
Total last week	28,601
Decrease	6

Austin County

There were no completions in Austin County during the week but several new operations were started. Aaronson and associates have staked a location for No. 4 Cundehusen in the Brenham district following the completion earlier in the month of No. 3, this lease. Anderson & Lyle have a rig up for No. 1 Goebel. At Raccoon Bend, Humble Oil & Refining Co. has a location for No. 2 Payne. No. 1 Payne was abandoned a week ago after drilling to 1,171 feet. Two miles west of Peters, T. F. Wood's No. 1 Trenckmann is drilling gumbo at around 1,000 feet. Weadock and associates have a rig up for No. 1 Ward. Thompson and associates have a location for No. 8 Pomacal, and Humble Oil & Refining Co. one for No. 2 Gotoskey, Raccoon Bend.

Brazoria County

Danciger Oil Co. has a location for No. 1 Carrie Bartlett, 3 miles west of Columbia. Gulf Production Co.'s No. 3 Perry is drilling in hard sand at 2,465 feet. Roxana Petroleum Corp. has cleaned out the hole in its No. 1 Allen State and will deepen it. At present it is shut down at 5,168 feet in sand and shale. This company still is having considerable trouble with heaving shale in No. 4 Allen and is trying to get to bottom at 5,384 feet. This company's No. 2 Bell is drilling hard sand at 4,288 feet. No. 1 Random is drilling shale and boulders at 2,320 feet. All of these Roxana tests are on Allen Dome except No. 2 Bell, which is on Clemens Dome. Rock and associates' No. 1 Muldoon at Slop Bowl, is drilling sandy shale at 600 feet. Rycade Oil Corp.'s No. 12 Nash is in heavy shale at 6,282 feet and is washing at 6,262 feet. Texas Gulf Sulphur Co. has a location for No. 2 Pabst and also one for No. 2 Proesbetle.

Chambers County

A test is to be made of a formation encountered at 5,500 feet in Mills-Bennett's No. 1 Kirby, Barbers Hill district. In the same district, Humphreys corporation is rigging up for No. 6-B Kirby. Gulf Production Co.'s No. 2 George E. Smith, High Island, is drilling at 3,200 feet. This is an old well being deepened. McLean Oil Co.'s No. 10 Cade, also at High Island, is drilling at 3,550 feet. No. 11 Cade also is down below 3,350 feet.

Colorado County

Merritt Drilling & Development Co.'s No. 1 Svreck, 1½ miles southeast of Ellinger, is shut down at 469 feet. R. E. Waldrop's No. 1 Tait, a mile north of Altair, has been abandoned at 1,465 feet.

DeWitt County

Collette Oil Co. has a rig up for No. 1 Boldt. McNeil & Matthews have a location for No. 1 Teland.

Fort Bend County

Gulf Production Co. got a good well in the Blue Ridge district in No. 12 West Schenck, it being brought in making an initial daily production of 1,328 bbls. of 26.5 gravity oil from sand at 3,765 feet. Gulf also got another well at Blue Ridge, the No. 16-C Bassett Blakely, flowing 45 bbls. from a total depth of 2,972 feet. The latter is 40.5 gravity oil. Three Fort Bend County tests, Gulf's No. 5 Trone, Gulf's No. 5 Wolf and Rycade Oil Corp.'s No. 5 Fritz Meier, have been abandoned. The former, at Long Point, was drilled to 1,033 feet, No. 5 Wolf, also Long Point, to 1,128 feet, and the latter at Nash Dome to 4,592 feet, encountering salt.

As a result of No. 12 making a good well, Gulf Production Co. already has a location for No. 13 West Schenck at Blue Ridge. This company also is to deepen No. 10 Luscher. In the same district Abercrombie & Co. are to deepen their No. 2 West Scheneck. This company's No. 4 on this lease is drilling below 3,600 feet. Tom Blakely and associates' No. 1 Blakely, Blue Ridge, is drilling below 825 feet, and Cullen and associates' No. 1 Blakely below 1,025 feet. The latter operators also have a rig up for No. 1 Lafferty in this district. Cunningham Production Co.'s No. 3 Blakely is drilling below 830 feet. Gordon, Folwell & Dixon, who got a 1,350-bbl. producer a week ago in No. 1 Blakely, now have a location for their second test. Navarro Oil Co. also is making arrangements to deepen No. 1-B Robinson following the completion last week of No. 3-B Robinson. Sam Watts has a rig up for No. 1 Blakely.

At Big Creek, Gulf Production Co. is drilling ahead below 3,200 feet. This test encountered a salt water pay at 3,100 feet. This company's No. 44 Davis is drilling below 3,350 feet. Gulf Production Co.'s No. 14 Moore, Orchard district, is drilling gumbo and lime at 1,275 feet, and No. 2-A Beard, Long Point, below 260 feet. Gulf has another test, No. 5 Wolf, Long Point, which is down 1,110 feet.

At Nash Dome, Rycade Oil Corp. has rigs up for Nos. 18 and 19 Wisdom. This company's No. 16 Wisdom has been sidetracking at 4,138 feet and has 6⅝-inch casing cemented at 4,152 feet. Rycade Oil Corp.'s deep test, No. 12 Nash, is down 6,282 feet.

At Boling Sun Oil Co.'s No. 3 J. R. Farmer is drilling hard sand at 2,435 feet after sidetracking at 2,382 feet. This company has a rig up for No. 2 H. R. Farmer, and is drilling gumbo and lime at 1,612 feet in No. 1 Kasparek.

Goliad County

Empire S. Oil Co. has a location for No. 1 Idens, while Houston Oil Co. has a rig up for No. 4 Pettus.

Hardin County

East Batson Oil Co. has a 15-bbl. pumper in No. 6 Bates, Batson Field, production being from sand at 1,140 feet. A derrick already has been built for the seventh test on this lease. The Texas Company is drilling at 4,125 feet in No. 1 Sterling. In the Saratoga Field, Weldon Oil Co. is bailing for a test of a sand at 525 feet in No. 13 Hooks. Gulf Production Co.'s No. 17 Tabor, Saratoga, will be put on the pump, after encountering an oil sand around 1,200 feet.

S. R. Buchanan is drilling at 800 feet in No. 95 Millhome. The Capitol Oil Co.'s No. 9 Hodges is down 3,740 feet. Orange Petroleum Co.'s No. 4 Merchant, Sour Lake, is drilling at 3,750 feet. Paraffine Oil Co. has set a strainer at 1,100 feet in No. 43 Knight preparatory to a test.

Harris County

At Pierce Junction, Gulf Production Co.'s No. 19 Taylor, deepened to 4,486 feet, is flowing 700 bbls. of 40.5 gravity oil. Associated Oil Co. is drilling below 4,350 feet in No. 1 Boyles. Gulf Production Co.'s No. 1 Perry is down 4,600 feet, and No. 21 E. R. Taylor 4,500 feet. No. 22 Taylor is drilling at 2,350 feet. Leonard Petroleum Co.'s No. 1 Marland fee is drilling below 2,500 feet. Carl Lipper and associates are rigging up for No. 1 Hamman. A. P. Producing Co. has a location for No. 2 Whitehead in this district. Moody Corp. is drilling at 4,140 feet in No. 2 Hume. Navarro Oil Co.'s No. 3 Cain is below 4,945 feet. Rio Bravo Oil Co. has three drilling tests at Pierce Junction. No. 7 P. S. A. at 2,700 feet, No. 1 G. H. & S. A. at 2,550 feet and No. 101 on the latter lease at 1,925 feet. No. 6-B and No. 1 P. S. A., old wells, are being rigged up to deepen. Shaw and associates' No. 1 Fitzsimmons is drilling below 650 feet, and Smith and associates' No. 1 Humble fee below 4,225 feet. Sun Oil Co.'s No. 1 Fitzsimmons is drilling below 3,850 feet.

At Humble, Frank Long has a location for No. 1 Rosenthawl Gulf fee. Gulf Production Co.'s No. 14 Hoffman Gaillard, Goose Creek, is drilling below 2,740 feet. In the same district, this company's No. 21 Wright A, an old well being deepened, is drilling below 2,550 feet. Humble Oil & Refining Co. is making arrangements to deepen one of its old Goose Creek wells, No. 4 Ashbel-Smith, as is Port City Oil Co. its No. 1 Grace Addey, and the Powell Oil Co. its No. 6 Bryan. Also in this district is Southern Exploration Co.'s No. 6 Freeman-State, in which a strainer is being set at 3,300 feet for a test.

At Humble, Frank Long has a location for No. 1 Rosenthawl Gulf fee. Gulf Production Co.'s No. 1 Burt Griffith, this district, is drilling sticky shale at 5,421 feet. In the William Scott Survey, Humble Oil & Refining Co. has a derrick up for No. 73 Simms-Smith.

Jackson County

Wright Brothers have a rig up for No. 6 Drushel.

Houston County

The Texas Company has abandoned No. 1 Ham, a shallow test, at 655 feet, but

(Continued on Page 130)

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Well South of Moab, Utah, Making Oil

Flow Increases to 32 Per Cent. Big Wildcat Structure in Wyoming Being Tested. New Mexico and Colorado News

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 14.—Utah furnished an interesting development for the week in the Utah Southern Oil Co.'s No. 1 Frank Shafer, on the Cane Creek Dome south of Moab, which after being drilled to 5,000 feet by the Midwest interests, is being given a test at the 2,028-foot horizon by the new operator. After pumping water for two days it commenced making oil, the oil gradually increasing to 32 per cent, when the increased gas pressure made it necessary to shut down until the gas could be diverted. The oil is believed to be coming from a pool through a fissure of lime and shale bedded in salt.

In Wyoming, the Utah Southern Oil Co. has a show of oil in the Sundance at 2,261 feet in a test on the Garland Dome, one of the largest wildcat structures in the state, and will endeavor to go on down to the Embar-Tensleep horizon which shows for big production on the Oregon Basin structure 35 miles away. Midwest Oil Co. has a 234-bbl. well in the first Wall Creek in Salt Creek, and several small completions are reported in the La Barge area in southwestern Wyoming, where considerable drilling is under way. Oregon Basin is showing renewed activities with several wells spudding, but none of the 14 drilling wells are expected to reach the objective before spring. The Texas Production Co. has decided upon a wildcat test of the Alkali Butte structure in Fremont County. Fargo Western Oil Co. has a 200-bbl. well in the Poison Spider district west of Casper.

In New Mexico, the Texas Production Co. is completing its No. 1 Rhoades in Lea County as a gas well at 3,216 feet, where it is making 23,000,000 feet of gas and 20 bbls. of oil. Same company is abandoning its Dunken Dome test in Chaves County at 4,895 feet. Pueblo Oil Co. has a show of gas in its No. 1 Gessert, near The Texas Company's No. 1 Robinson, in Eddy County, a gasser. The voters at Artesia have approved a gas franchise applied for by Van S. Welch.

In Colorado, the oil men are closely watching a wildcat in Logan County being drilled by the Northeastern Colorado Oil Co., which is estimated to be within 50 feet of the Dakota sand at 5,214 feet and which will reveal important geological information concerning structures in the Denver Basin. Tidewater Associated Oil Co. has closed down its deep test on the Rangely Dome at 4,800 feet until spring when operators on that structure may unite in a rotary test to the Pennsylvanian. Moffat County new discoveries are showing increased production in test runs being made and the Morrison sand looks much better as a prospective producing horizon. Several new wildcats are being started in the state, one of these being on a shallow structure in Jackson County, near the Routt County line, where the Dakota is expected at 800 feet.

Utah

One of the most interesting developments of the week in the Rocky Mountain area was the showing of oil made in the Utah Southern Oil Co.'s No. 1 Frank Shafer on Section 6-27-21, on the Cane Creek Dome, one of the so-called Colorado River structures south of Moab in southeastern Utah. This is the well which started the expensive and puzzling drilling campaign in southeastern Utah more than a year ago. It was being drilled by the Midwest Exploration Co. as a joint operation with the Utah Southern Oil Co. when in December, 1925, it blew in at 2,028 feet making 2,000,000 feet of gas and as high as 350 bbls. of oil. The flows by head continued for several weeks, but water made its appearance and after working on the well for four months without getting a water shutoff, drilling was resumed. The hole was carried to 5,000 feet and had several additional shows. It cut immense beds of salt, the result of which was the advancement of the theory that it was a salt dome. In the meantime a well was drilled 2 miles to the east which the Midwest considered a test on this theory, and another was drilled on the Shafer Dome to the south. Three wells were drilled on the Colorado side by the General Petroleum Corp., and all of these cut the thick beds of salt with frequent shows of oil and gas in thin strata of lime, shale and sand bedded in the salt.

The result of these tests satisfied the Midwest, which suspended operations in the territory. A deal was made whereby the Utah Southern took over the equipment with a view to making further tests of the salt dome theory by drilling wells on the flanks of the structures. The first step in these plans was to make a further test of the 2,028-foot horizon in No. 1 Frank Shafer to see if commercial production could be recovered and to obtain fuel oil for drilling the other wells. The showings found below 2,028 feet which were passed up at the time in the hopes of encountering a true sand, could not be tested by the Utah Southern upon taking over the operation on account of collapsed pipe and other casing troubles. However, last week it succeeded in perforating the 6¼-inch pipe at the 2,028-foot horizon and on October 3 commenced pumping the well for a test. It should be recalled that water had stood on the formation for many months, that mud had been pumped into the hole on several occasions in efforts to shut off the water showing with the oil, and that it had been given rather harsh treatment. The horizon in which the gas, oil and water had been encountered was only 4 or 5 feet thick, with salt above and below.

Oil Show Increases

The well commenced pumping between 600 and 700 bbls. of water a day. There was a little gas with the water from the start. Saturday evening the quantity of gas commenced to increase and with it came a little oil. At 4 o'clock Sunday morning, the fluid was turned into the tank and between that time and the same hour Monday morning, it made 220 bbls. of fluid of which 39½ bbls. was oil and the remainder water. From 4 o'clock Monday morning to the same hour Tuesday morning, the well pumped 291 bbls. of fluid, of which 62 bbls., or 32 per cent, was oil, against 18 per cent in the preceding 24-hour period. From Tuesday morning until it was decided to shut down, the well made 180 bbls. of fluid of which 58 bbls. was oil. Pumping was stopped temporarily because the increasing gas flow interfered with the pump. The gas pressure also was credited with holding back the quantity of fluid. Efforts are now being made to divert the gas so that the test can be continued.

The theory held by the operators is that the oil is coming through a fissure from some other source, and that the water is in a pocket that can be exhausted by pumping. In support of this argument, it is pointed out that the well never showed any hydrostatic pressure and that the original flows came from gas pressure. The test will be watched with unusual interest, because its performance may throw some light on the theories involved. If the thin stratum is a fissure coming from a large pool of oil, continual pumping may open the channels and make a commercial well. If the oil is in a pocket in the salt, it probably will be exhausted. In any event, it will lead to important disclosures. Since most all the wells drilled through the salt beds over a very large area showed similar conditions, the results may be far reaching.

Other Utah operations disclosed nothing out of the ordinary during the week. The Midwest Exploration Co.'s No. 1 Hughes, Section 30-34-19, Elk Ridge Dome, is still drilling ahead in the hope that something interesting may be found below the objective sand in the lower Pennsylvanian which already has been penetrated. It is now drilling in hard blue sandy shale at 4,396 feet. Embar Oil Co.'s No. 1 Big Six, Section 34-25-21, Moab Dome, is making progress slowly in a 3-inch hole and is bottomed in sandy lime at 4,625 feet which is making persistent shows of oil with considerable gas pressure. The Texas Production Co.'s No. 1 Shipley, Section 5-27-14, Sweetwater Dome, had to suspend to drill a water well, which is spudding. Midwest Exploration Co.'s No. 3 Ashley Creek, Section 23-5-22, near Vernal, cemented the 12½-inch casing at 1,100 feet to shut off water in the Dakota and is drilling ahead towards the Sundance expected at 1,900 to 2,000 feet. Before reaching the objective it will have to go through the Morrison which had a big flow of gas in the original test. Midwest Refining Co.'s No. 1 Early, Section 13-4-6, near Duchesne, is straightreaming from 2,250 feet to 2,876 feet to lower the 8¼-inch casing. This is the well which had 2,400 feet of oil standing in the hole when operations were resumed recently after it had been idle for four years.

Wyoming

A good showing of oil in the Sundance sand on the Garland structure in Big Horn County in the Utah Southern Oil Co.'s No. 3 Government, NE cor. SW Section 29-56-97, attracted special attention to the Wyoming wildcats during the week. This well entered the Sundance at 2,261 feet and was drilled 30 feet into that horizon. It showed some saturation with a heavy oil that upon analysis proves to be of a paraffin base, but no reliable estimate of the capacity can be made as the hole was full of water from a higher level. Drilling with 8-inch tools was halted just above the sand and a 6-inch bit was used to go into the sand. The 8¼-inch will be set on the shelf above the sand and a test made if the showing warrants it.

The structure is located in Big Horn and Park Counties on the south extension of the Elk Basin anticline, and has a closure of 2,600 feet, probably the largest closure of any structure in Wyoming and is approximately 10 miles long and 3 miles wide. It is badly faulted. The Utah Southern's well is believed to be in the same fault zone as the Ohio Oil Co.'s No. 2 Cross Gas, NW NW Section 33-56-

(Continued on Page 86)

UNITY VALLEY AREA, SASKATCHEWAN, INCREASES WET GAS PRODUCTION

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 12.—The Province of Saskatchewan has come to the forefront with a reported large additional production of wet gas in the Unity Valley area, near Vera. Unity Valley Oil Co.'s No. 1, SE Section 23-41-24w3, drilling at approximately 2,900 feet, got a flow estimated at between 3,000,000 and 4,000,000 feet a day. The gas is accompanied by slight traces of oil. At this depth, the test is 1,200 feet in the limestone. The same test encountered in the upper horizons last year an oil showing estimated good for 25 bbls. a day, and later a dry gas flow estimated as high as 10,000,000 feet a day. It recently resumed drilling after a considerable shutdown. The test was continued to 2,925 feet, when trouble developed owing to sulphur water which seeped into the hole through the cement at the bottom of the 6-inch casing at 2,200 feet. The drillers will probably run a string of 4¾-inch casing to shut off the water. Unity Valley's No. 2, SE, Section 23-41-24w3, is being rigged up. Standard tools will probably be used for No. 2 test.

In the Rosetown area, the Rosetown Leaseholding & Development Co., LSD 13, Section 4-31-17w3, is reported to have encountered a fair show of gas at 215 feet. The test is now at 225 and drilling. The drillers before reaching this depth had considerable trouble with quicksands and a heavy flow of artesian water. It is planned to cement casing at 300 feet and shut down operations at this depth till March.

In the Simpson district, Simpson Oil Co., Section 9-29-25w2, is reported at 1,400 feet and drilling. Near Kenaston, Big Six Oil Co.'s No. 3, LSD 16, Section 18-29-2w3, is reported rigged up ready to spud in.

Ribstone-Blackfoot

On the Saskatchewan end of the Ribstone-Blackfoot structure, London-Ribstine Oils, LSD 14, Section 10-43-28w3, is reported drilling at 750 feet, after shutting off the water at 350 feet.

In the southern Alberta foothills, west of Nanton, Imperial Oil, Ltd.'s Highwood No. 1, LSD 3, Section 36-18-3w5, has reached an interesting stage. This test is located on the Sinclair structure, south of the Turner Valley Field, and geological conditions generally are somewhat similar to those in the Turner Valley. Imperial-Highwood No. 1 is drilling around 3,500 feet, after entering the Fernie shales at 3,320 feet. If the formations correspond approximately to those in the Turner Valley, the drill should get the Madison limestone at 4,220 feet. In the drilling so far, no important production has been met, though a little gas was encountered in the upper horizons. In the top of the Fernie shales, production was thought to be possible in the Home sand, which in Home No. 1 well in the Turner Valley yielded a commercial production of light crude oil at 4,560 feet. In the Imperial-Highwood No. 1 this horizon was not productive owing to fault conditions, the drill having crossed a fault at this point, but the Madison limestone is expected to reveal more favorable conditions. At Imperial-Highwood No. 1 the structure is very steeply inclined, making it impracticable to use a rotary outfit, and even with the cable

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New Drilling Campaign in California

Recently Discovered Fields, Deeper Drilling at Long Beach and Prospective New Pools Figure in Program

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 12.—The oil industry in California will undoubtedly witness a very active drilling campaign during the coming year as a result of projected development work in recently discovered fields and the resumption of drilling at Long Beach where operators are going after the deep zone which has been lying dormant since its existence became known several years ago. Seacliff, Potrero, Ventura Avenue, Long Beach, Mount Poso and Round Mountain guarantee more than a normal amount of work during the next 12 months and it is almost a foregone conclusion that another new field or two will be opened up to further complicate matters during this period. Many fail to appreciate the possibilities of the Union Avenue area at Bakersfield in Kern County because of the apparent failure of the Pacific Eastern Production Co. to secure commercial production in its initial wildcat, but we should not minimize the potentiality of this district nor condemn the entire area because the pioneer well did not come in as a gusher. It took 17 holes to locate the Seal Beach Field but perseverance finally won out. The Union Avenue area has been temporarily shoved into the background because of the delay resulting from a myriad of difficulties but it need not be at all surprising if the industry wakes up some fine morning and reads the announcement of a new field in this section. The Pacific Eastern's wildcat has shown production tendencies from time to time and this hole is directly responsible for most of the wildcatting now under way in the southern part of the San Joaquin Basin in Kern County. There is a strong probability that other areas adjacent to the Union Avenue district may also yield commercial production especially those along the Bear Mountain sheer zone.

Drilling operations in the Mount Poso and Round Mountain fields in Kern County during the next several months depend more or less upon the extent and productivity of the latter area and the Shell will undoubtedly extend its Martinez-Coalinga line southward to this field via Midway-Sunset and Mount Poso if developments warrant, thus insuring an active drilling program which has been delayed because of inadequate pipe line facilities. The Shell has large holdings at Mount Poso and Round Mountain and it would be a logical move for the company to lay a line into these fields if sufficient production resulted from its operations in accordance with its agreement with the Elbe Oil Co. The Shell recently concluded a five-year purchase contract with the Honolulu Consolidated Oil Co. covering approximately 8,000 bbls. of crude oil per day in the Midway-Sunset Field and this agreement will also be an important factor in stimulating work in the other two areas, which have been very inactive for several months. Deepening operations and new work at Long Beach are getting under way on a large scale and daily production will register an appreciable increase.

New Pipe Lines

Drilling operations in the recently discovered Seacliff Field in Ventura County are getting under way much quicker than anticipated and 15 strings of tools will probably be in operation within 30 days. This does not sound like a very comprehensive drilling program in a newly discovered field but these 3,000-foot holes can be drilled into production in about about five or six weeks. No move has yet been made to link this field up with any of the major pipe line systems but it is a foregone conclusion that the Pan American will begin laying a line as soon as substantial production is assured. The company's 10-inch Diesel equipped line running southward from Elk Hills to Los Angeles will probably be intercepted somewhere around Piru about 40 miles east of Seacliff. The General Petroleum's Kern-Los Angeles line parallels the Pan American's facilities and this company may also undertake preparations soon to tap this major system. As a matter of fact it is practically a foregone conclusion that both the General Petroleum and Pan American will connect the Seacliff Field with their main trunk as each company already has production in the prolific Ventura Avenue Field in addition to being assured of production at Seacliff some 5 or 6 miles west. The output of these two fields could therefore be handled very advantageously by substituting pipe line movement in place of the present method which necessitates a long tanker haul to the various refineries.

Long Beach

One of the most interesting features in connection with the move under way to participate in deep drilling in the Long Beach Field is the large number of new wells being started. The panorama is changing from day to day and when one approaches a superintendent of any of the larger companies in this field the salutation is usually "Hello Bill, how many new rigs have you put up since last night?" or "Who's putting up those derricks over there?" This new work is only a part of the total development campaign under way as redrilling and deepening jobs naturally predominate and should continue to do so during the present drilling period because former upper zone producers have a handicap of about 4,000 feet and should therefore reach the deep sand first. This is of special importance particularly in view of the fact that all operators contemplating deep sand development desire to participate in flush production and hence the time element is a vital factor. The Shell has taken the lead so far as new drilling is concerned and will probably head the list for several months as this company is the largest single lease holder in the Long Beach Field. Its development program is rather limited at present but all indications point to a substantial increase in both new drilling and deepening work. Four new wells are already under way on the Alamitos property but these will be augmented within a few days by several more, as five additional derricks on the same lease are in course of construction. The Shell is also putting down two new wells on the Cresson lease and as new rigs are going up for No. 3 Binkley, No. 7 Nesa and No. 5 Patton-Wilson, the company's drilling staff will again assume first rank .

Deepening Campaign

The California Petroleum Corp., which is second to the Shell in lease holdings at Long Beach, has inaugurated a deepening campaign covering eight new wells destined for the deep sand, three of which are already under way. The Richfield Oil Co., which already has several large deep sand wells to its credit in this field, also contemplates a comprehensive drilling and deepening program and that this concern is not losing any time in getting under way is evidenced by the fact it is running 13 strings of tools at present. A careful check indicates that the Richfield has 39 locations in proven territory available for work. Fifteen are located on property acquired from the San Martinez Oil Co. a few months ago. The Richfield intends to prorate this work over a normal period but this company, like the Shell and California Petroleum Corp., may be forced to drill sooner than anticipated if adjoining operators force an offsetting campaign. The Superior and General Petroleum are augmenting present work by putting up three new rigs on various properties. The California Eastern Oil Co. has a consid-

(Continued on Page 122)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well, Location—	S-T-R	Depth	Status
Cal. Eastern, No. 1 Cypress, Potrero	27- 3-14	5,043	suspended
Associated, No. 1 Cypress, Potrero	34- 2-14	4,820	deepening
Hurst Oil Corp., No. 1 Inglewood, Los Angeles Co.	28- 2-14	2,941	sd. sh. drilling
Mont. Park Oil, No. 1 Browning, Monterey Park	26- 1-12	3,018	hd. sd. drilling
Associated, No. 1 Patterson, Pico	13- 2-12	1,280	sd. drilling
Circle Oil Co., No. 1 Pomeroy, Manchester	23- 3-14	4,280	suspended
Shell, No. 1 Mission, San Fernando	4- 2-15	4,460	hd. sd. drilling
Sou. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	4,870	suspended
Carr, O. P. No. 2 Foster, San Juan Capistrano	13- 8- 8	3,961	testing show
Thomason & McCoy, No. 1 Rina, Saugus	27- 5-16	1,610	suspended
Southwest Pet., No. 1 Ramsauer, Watts	4- 3-13	4,088	cleaning out
San Clemente Oil Co., No. 1 Peck, Hawthorne	20- 3-14	5,300	cemented
O'Donnell, J. E., No. 1 Dupree, Hawthorne	29- 3-14	5,304	suspended
White Behr, No. 1 Watson, L. A. County	21- 4-14	1,181	sd. drilling
Shell, No. 1 Allec, Placentia	31- 3- 9	4,753	hd. sd. drilling
Standard, No. 1 Olive, Orange Co.	17- 4- 9	4,510	hd. sd. drilling
Son. C. A., No. 1 Pinkerton, Orange Co.	5- 5-11	3,472	sd. sh. drilling
Ohio Oil Co., No. 1 Bolsa Dome, Orange Co.	35- 5-11	3,410	sd. drilling
Stein, Leo, No. 1 Long, Orange Co.	21- 5-11	4,395	hd. sd. drilling
Shell, No. 1 Stern, Orange Co.	22- 3-10	1,173	sd. drilling
Standard, No. 1 Rindge, Palms	36- 1-15	rig	in litigation
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,650	hd. sd. drilling
Fuller & Gray, No. 1 Puente, L. A. County	14- 2-10	rig	rigging up
Anchor Oil Co., No. 1 Hudson, Los Angeles Co.	19- 2-10	2,395	suspended
Pet. Securities, No. 1 Newport, Orange	3- 6-10	2,476	hd. sd. drilling
Olympic Refg. Co., No. 1 Sunset Beach, Orange Co.		.....	location
Turner, S. S., No. 1 Escondido, San Diego Co.		mtl.	bldg. rig

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Associated, No. 1 Smith, Kettleman Hills	12-23-18	2,043	suspended
Bolsa Chica, Well No. 1, Kettleman Hills	30-23-19	3,502	suspended
General Pet., No. 1 Burbank, Kettleman Hills	30-23-19	3,105	pipe bad
General Pet., No. 2 Oschener, Kettleman Hills	26-22-18	5,210	bl. sh. drilling
General Pet., No. 1 Dome, Kettleman Hills	4-24-19	3,800	suspended
South Coalinga, Well No. 1 Kettleman Hills	35-24-19	2,930	pipe trouble
Monocline Dev. Co., Well No. 1, Kettleman Hills	7-21-21	3,086	sd. sh. drilling
McPhail, Hugh, Well No. 1 Kettleman Hills	13-24-18	2,160	hd. sd. drilling
Milham Explin., No. 1 Kettleman, Kings Co.	2-22-17	5,288	hd. sd. drilling
Shell, No. 2 Berlywood, Moorpark	32- 3-20	5,957	hd. sd. drilling
Star Petroleum, No. 2 Canet, Ventura Co.	13- 3-23	2,163	hd. sd. drilling
Continental Oil Co., No. 1 Burnham, Ventura Co.	22- 5-18	3,294	hd. sd. drilling
Standard, No. 1 Camarillo, Ventura Co.	29- 2-20	5,618	sd. sh. drilling
Petroleum Sec., No. 1 Diablo, Ventura Co.	26- 5-18	3,371	gr. sh. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	3,971	hd. sd. drilling
Shell, No. 1 Strathern, Ventura Co.	6- 2-18	rig	rigging up
Geis & Bradford, No. 1 Sulphur Mountain, Ventura	21- 4-22	1,997	testing
Miley Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	980	suspended
Richfield, No. 27 Piru, Ventura Co.	35- 5-18	1,902	suspended
Milham Explin., No. 2 Buttonwillow, Kern Co.	8-28-23	4,662	gas well
Milham Explin., No. 3 Buttonwillow, Kern Co.	7-29-24	4,150	suspended
Pacific Eastern, No. 1 Fruitvale, Kern Co.	21-29-27	2,490	gr. sd. drilling
Pacific Eastern, No. 1 Bakersfield, Kern Co.	6-30-28	4,503	testing
Barnes, L. S., No. 1 Stine, Kern Co.	11-30-27	....	location
General Pet., No. 1 Edison, Kern Co.	5-30-29	3,861	little show
Getty, George F., No. 1 Edison, Kern Co.	22-29-29	3,395	gr. sd. drilling
Midway Northern, No. 1 Edison, Kern Co.	29-29-30	mtl.	building rig
Union, No. 1 Mon Bluff, Kern Co.	28-27-28	mtl.	building rig
California Pet., No. 1 Adobe, Kern Co.	25-27-28	776	sd. drilling
Shell, No. 1 Mon Bluff, Kern Co.	3-28-28	3,047	fishing
Superior, No. 1 McFarland, Kern Co.	11-26-27	rig	rigging up
North American, No. 1 Wallace, Delano	5-25-26	3,703	br. sh. drilling
Fresno Madera Oil Co., No. 1 Clovis, Fresno Co.	18-21-21	3,830	hd. sd. drilling
Barneyberg Oil Co., No. 1 Brown, San Luis Obispo	25-32-14	2,199	br. sh. drilling
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	1,648	suspended
Miley Ex. Co., No. 1 Carissa, San Luis Obispo Co.	15-29-17	mtl.	building rig
Union Oil Co., No. 1 Huasna, San Luis Obispo	34-32-15	rig	rigging up
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 5	4,972	hd. sd. drilling
Shell, No. 1 Murphy, Petaluma	29- 5- 6	6,369	hd. sd. drilling
Shell, No. 2 Murphy, Petaluma	8- 5- 6	1,960	hd. sd. drilling
Thomas & Hammill, Well No. 1 Alameda Co.	16- 3- 3	1,470	hd. sd. drilling
Buttram, F. W., No. 1 Odin, Santa Barbara Co.	20-25-27	614	sd. drilling
Elliott & Clarke, No. 1 Marcos, Santa Barbara Co.	3- 6-29	2,702	br. sh. drilling
Gorham, G. O., No. 1 Orcutt, Santa Barbara Co.	33-10-34	mtl.	building rig
Becker, Geo. F., No. 1 Summerland, Santa Barbara	33- 4-25	3,060	shut off N. G.
Birch Oil Co., No. 1 Porterille, Tulare Co.	13-20-26	2,301	hd. sd. drilling

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This Week	Daily Average	Total Last Week	Daily Average	This Year to Date	Same Time Last Year
Crude oil	.....	.....	309,130	44,161	8,561,735	10,223,618
Fuel oil	81,929	11,704	71,512	10,216	6,716,619	6,206,266
Diesel and gas oil	75,163	10,738	.....	.....	2,303,789	2,683,096
Gasoline	78,104	11,158	73,026	10,432	7,630,649	5,852,341
Tops	.....	.....	.....	.....	.....	302,347
Coastwise—						
Crude oil	428,071	61,153	230,614	32,945	20,654,882	19,906,565
Fuel oil	248,967	35,567	79,841	11,406	10,744,847	9,646,816
Diesel and gas oil	18,131	2,590	.....	.....	341,048	147,960
Gasoline	273,830	39,119	169,572	24,225	8,179,492	6,514,909
Kerosene	9,802	1,257	4,619	660	204,310	168,179
Tops	.....	.....	.....	.....	152,275	501,520
Exports—						
Crude oil	48,125	6,775	.....	.....	2,062,877	3,542,117
Fuel oil	438,088	62,584	612,689	77,527	23,850,226	15,286,596
Diesel and gas oil	138,008	19,715	4,727	675	1,238,039	500,727
Gasoline	148,428	21,204	87,656	12,522	4,348,043	4,056,555
Tops	.....	.....	.....	.....	227,204	141,467
Kerosene	62,045	8,864	80,416	11,488	1,825,793	2,638,763

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Crude oil	.....	.....	.....	.....	.....	.....
Fuel oil	.....	.....	.....	.....	.....	78,653
Diesel and gas oil	.....	.....	.....	.....	671,340	1,522,660
Gasoline	75,476	10,782	71,563	10,223	1,760,014	853,312
Tops	.....	.....	.....	.....	.....	73,698
Kerosene	.....	.....	.....	.....	.....	.....
Lubricants	.....	.....	.....	.....	370,180	407,860
Coastwise—						
Fuel oil	132,481	18,926	7,715	1,102	4,380,219	4,800,263
Diesel and gas oil	.....	.....	.....	.....	208,489	.....
Gasoline	.....	.....	80,130	11,447	4,421,458	3,980,769
Kerosene	.....	.....	.....	.....	198,243	301,764
Exports—						
Fuel oil	.....	.....	.....	.....	2,250,702	2,863,280
Diesel and gas oil	.....	.....	.....	.....	.....	.....
Gasoline	16,729	2,390	8,746	1,249	2,384,207	1,508,685
Kerosene	55,029	7,861	.....	.....	819,774	1,879,829
Lubricants	4,125	589	.....	.....	26,695	66,706

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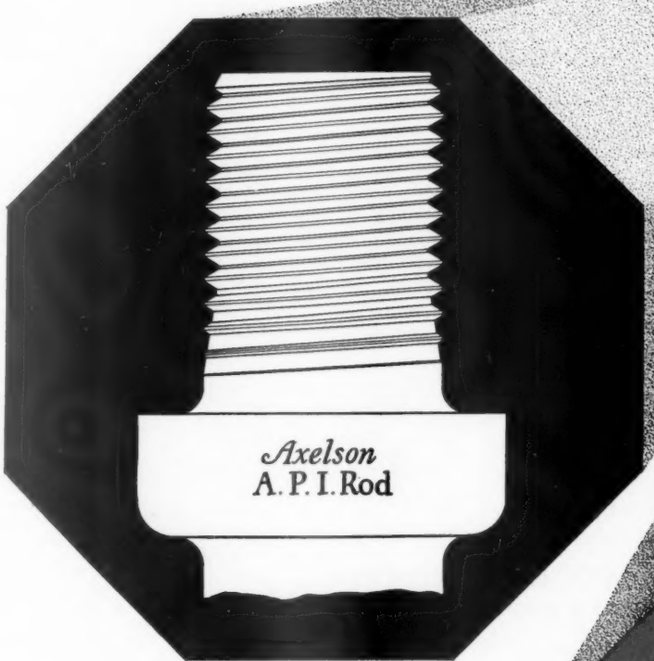

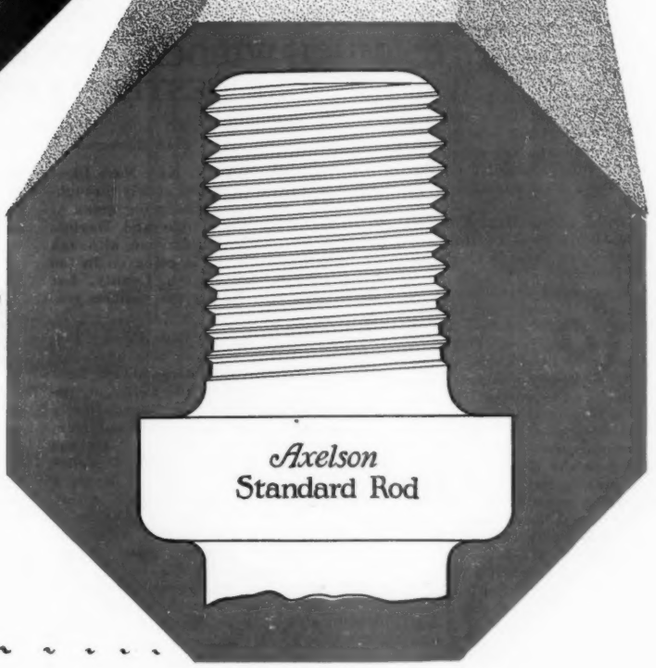

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Better Completions in Eastern Fields

Southeastern Ohio Has Good Wells; Southwestern Pennsylvania and West Virginia More Than Usual Gassers

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Nov. 12.—Development work in the eastern fields showed some improvement in good wells completed in the deep sand territory in southeast Ohio. West Virginia had a good many completions, but all light, dry or gas wells. Southwest Pennsylvania had more than the usual number of completions and nearly all gassers, located in Green County.

In the SW of Section 24, Ward Township, Hocking County, the Kachelmacher estate completed No. 26 on the James T. Tracy estate. It produced 126 bbls. the first 24 hours after drilled through and shot in the Clinton sand.

In the SE of Section 10, Hopewell Township, Licking County, the Pure Oil Co. got a 50-bbl. producer at its second test on the Louisa C. Brown farm. The total depth of the well is 3,073 feet.

West Virginia

In Jefferson district, Pleasants County, the Bailey Gas Co. has drilled through the Squaw sand a test on the Lafayette Pethtel farm. It is a duster. In the same district, L. N. Rinehart & Co.'s second test on the Okey Ingram farm is showing some oil in the Big Injun sand. In Grant district, George Pickens & Co. completed a second test on the Rebecca Graham farm. It is dry in the Big Injun sand.

In Geary district, Roane County, the United Carbon Co.'s test on the Earle Keene farm is a gasser in the Big Injun sand. In Grant district, Ritchie County, the Mellon Oil Co.'s second test on the Charles Lewis farm is a gasser in the Berea grit.

In West Union district, Doddridge County, the American Oil Co.'s test on the A. B. White heirs' farm is a gasser in the Big Injun sand. In the same district, the Murphy Oil Co.'s No. 7 on the Wilmer Collins farm is a gasser in the Big Injun sand.

The Clarksburg Light & Heat Co. has a gasser in the Gantz sand at No. 254 on the S. D. Gore heirs' farm in Coal district, Harrison County.

In the Big Injun sand development in Henry district, Clay County, the Virginian Gasoline & Oil Co. completed No. 4 on the R. D. Summers farm, 600 feet west of No. 2 and good for 15 bbls. a day.

In Otter district, Braxton County, the Bronwell Corp. has a duster in the Maxon sand at a test on the J. M. Boggs farm. In Cameron district, Marshall County, the Manufacturers Light & Heat Co. has a gasser in the Gordon sand at a test on the William Snyder farm. In Washington district, same county, Ervin T. Wood & Co. have a duster at a test on the Edward Newman farm.

Drilling Test Wells

On Big Run of Bone Creek, Union district, Ritchie County, A. L. Britton and others have started to drill on the J. A. Hall farm. In Lee district, Calhoun County, the Hope Construction & Refining Co. is drilling deeper its test on the Parson-Bennett farm.

In Southwest district, Doddridge County, the Pittsburgh & West Virginia Gas Co. completed in the Big Injun sand a test on the F. R. Wanstreet farm. It is a gasser.

In Union district, Tyler County, the Little Flower Oil Co. completed in the Keener sand No. 4 on the Morgan Henderson farm, good for 5 bbls. a day. On Tanners Run, DeKalb district, Gilmer County, 1 mile northeast of the Ridd'e heirs' farm, the Hope Construction & Refining Co.'s test on the Homer Carr farm is through the Big Injun sand and dry.

On McFarlan Creek, Murphy district, Ritchie County, John F. Deem & Co. completed in the Maxon sand No. 3 on the Joseph Tingler farm. It is a gasser. In the same district, the South Penn Oil Co. completed the rigs for Nos. 10 and 11 on the Anna M. Wilson farm. The Hope Construction & Refining Co. has the rig completed for No. 3 on the Noah and Fay Jordan farm. In the same district, the South Penn Oil Co. has drilled No. 8 on the Anna M. Wilson farm through the Big Injun sand and dry. It is now drilling to the Berea grit.

On Sugar Creek, Reedy district, Roane County, the Heck Oil Co.'s second test on the A. D. Tallman farm is through the Berea grit and good for 15 bbls. a day. The location is 600 feet southeast of the first test. In Sheridan district, Lincoln County, H. H. Dial's No. 4 on the Alice Ferrell farm is a gasser in the Berea grit.

In Greene district, Wetzel County, W. B. Schamp & Co. have completed a test on the Evam Morgan farm. It is a gasser in the Big Injun sand. In the same district, H. Snyder and others have a gasser in the same formation at a test on the Morgan Morgan farm.

In McElroy district, Tyler County, the Hope Construction & Refining Co. has a gasser in the Big Injun sand at a test on the Hannah Merritt farm. In Lee district, Calhoun County, Martin Crawley's second test on the L. R. Stump farm is a gasser in the Big Injun sand.

Wildcat Duster

In Ravenwood district, Jackson County, B. L. Morfotd and others have drilled their wiidcat on the W. H. Hardin farm through the Berea grit and it is a duster. Just a little gas was developed in the Berea grit.

Southeast Ohio Completions

At the close of the week the southeast Ohio fields completed nothing better than light wells and only a few of these.

In Section 23, Madison Township, Licking County, George H. Long completed his test on the Frank Fulton farm. It is a very light pumper in the Berea grit. In the SE of Section 13, Knox Township, Columbiana County, the Renner-Diebel Oil & Gas Co. has a 3,000,000-foot gasser in the Berea grit at No. 20 on the Addison Benner farm.

In the SE of Section 13, Muskingum Township, Muskingum County, Hunter, Atha & Co. got a 3,000,000-foot gasser at a test on the H. K. Flowers farm. In the NW of Section 18, Sutton Township, Meigs County, the Ohio Fuel Supply Co. has started to drill a test on the C. B. & M. Davis farm. In the same township, the Penna. Berea Co. has started to drill No. 5 on the Hannah H. Capehart farm.

In the NW of Section 29, Harrison Township, Perry County, the Glendale Oil & Gas Co. completed in the Clinton sand a test on the J. & M. Starcher farm. It is a duster. In the SW of Section 30, Orange Township, Carroll County, the Leesville Oil & Gas Co. has completed in the Berea grit No. 5 on the Thomas E. Tripp farm. It is good for 10 bbls. a day.

In the Fisher Pool, Section 17, Alexander Township, Athens County, J. A. Ronhausen and others completed in the salt sand No. 5 on the O. C. Chalpman farm. It is a light gasser. In the same pool, section and township, J. H. R Ronhausen and others have completed a second test on the J. S. Cassels farm. It is also a light gasser in the same formation.

Noble County

In the SE of Section 28, Elk Township, Noble County, B. C. Robinson and others completed in the Germantown sand a second test on the Catherine Young farm. It is good for 3 bbls. a day. In the SE of Section 21, Wayne Township, Belmont County, D. U. Powell and others completed a second test on the H. D. Wheeler farm. It is a light pumper in the Keener sand.

In Section 7, Alexander Township, Athens County, J. A. Ronhausen and others have started to drill another test on the J. A. Cabbels farm. In the SE of Section 25, Jefferson Township, Noble County, Young & McKibben completed in the Big Lime formation a test on the William Rhomer farm. It is a very light pumper.

In the NW of Section 35, Washington Township, Hocking County, Wallsmith & Kinsel have drilled their test on the William McGlaughlin farm through the Clinton sand and it is dry. In the SE of Section 12, Columbia Township, Lorain County, the Ohio Fuel Supply Co. has drilled a test on the J. M. and H. Longbon farm to a depth of 2,954 feet. It is a gasser good for 250,000 feet. In the NW of Lot 16, same township, the Ohio Fuel Supply Co. has completed a test on the R. R. Fitch farm. It is a gasser at the same depth good for 750,000 feet.

Washington County

In Section 46, Salem Township, Washington County, George Hess & Sons completed in the salt sand a test on the O. S. Greves farm. It is a duster. In Lot 6, Muskingum Township, the Bachelor Oil Co. completed in the Macksburg 500-foot sand a test on the M. H. Dyer farm. It also is a duster.

In Lot 6, Middleburg Township, Cuyahoga County, M. E. and S. K. Rogers have a gasser at 2,990 feet at a test on the Otto Lizzy farm.

In the SW of Section 24, Ward Township, Hocking County, the Kachelmacher estate has completed and shot in the Clinton sand No. 26 on the Tracey estate. The first 24 hours after shot the well produced 125 bbls. and is the best deep sand producer completed in more than two weeks.

In Section 24, Perry Township, Licking County, the Hope Construction & Refining Co. has completed a 10-bbl. pumper in the Berea grit at a test on the Lawrence C. Griffin farm. In Section 10, Perry Township, the Pure Oil Co. has drilled a test on the L. S. McCann farm through the Clinton sand to a total depth of 2,965 feet and showing very little oil.

In Section 9, Prairie Township, Holmes County, the Ohio Oil Co.'s test on the Jacob E. Miller farm is dry in the Clinton sand at a total depth of 2,980 feet.

West Virginia Tests

In Geary district, Roane County, Douglas Brothers have started to drill on the R. F. Sergent farm. In Reedy district, the Heck Oil Co. is due in the Berea grit at a test on the F. D. Vandale farm. In Harper district, the Producers Oil & Gas Co. has a crooked hole at 1,190 feet on the David I. Horner farm.

In Murphy district, Ritchie County, the West Fork Oil Co. has started to drill on the Kelena C. Andrews farm. In Mc-

(Continued on Page 103)

MUCH WILDCAT WORK GOING ON IN WESTERN KENTUCKY COUNTIES

By Whit
Staff Correspondent, Kentucky-Tennessee

BOWLING GREEN, Ky., Nov. 14.—Drilling is going on rather slowly throughout almost the entire producing areas of Kentucky, outside of Ohio and Daviess Counties in the western division, although the usual development is going on in the Glasgow Field of Barren County, but not as active as during the summer season.

The Ambrose Pool in Ohio County is a surprise to every oil man who has operated in the western division of Kentucky in the staying of the wells and the good producers found at a comparatively shallow depth, the oil being found from 400 to less than 800 feet deep. On the Hill Rhodes farm, to the west of Weller lease. In this pool, just completed, a well is reported good for 300 bbls. initial, and No. 12 on the Fannie Lake lease, one for 200 bbls., while No. 20 on the Mary J. Elmore 100-acre lease is estimated close around 150 bbls. initial. The steady pumping of many wells on all sides of the three leases mentioned does not seem to affect the producing sand to any great extent, as the late completions are fully as large as the original wells on the three properties. As long as wells the size of these are found, the low price of crude will hardly stop the drilling of additional wells. Much wildcat work is under way in both Ohio and Daviess Counties and numerous tests will be drilled in McLean and possibly in Henderson County, as anticlines are known to exist in the two counties.

Week's Work

The summary of the week's work in the Kentucky-Tennessee fields shows 16 completions, 9 producers with an initial production of 900 bbls., 6 dry holes and 1 gas well. Compared with the previous week, there were 10 less completions, 1 less producer, 386 bbls. more production, 10 fewer dry holes and 1 more gas well. The wells were distributed by counties and districts as follows:

County—	Oil Comp.	Wells	Prod.	Dry	Gas
Ohio	12	8	890	4	0
Warren	2	0	0	2	0
Daviess	1	1	10	0	0
Clay	1	0	0	0	1
Total	16	9	900	6	1
Last week	26	10	514	16	0
Difference	10	1	386	10	1

New Structural Map

Advice from the Geological Department of Kentucky is that: "Oil and gas operators, now turning with growing interest to northwestern Kentucky, where production of petroleum in Ohio, Daviess and Hancock Counties is running about 160,000 bbls. a month, will welcome the new structural geological map of Henderson County, now available. This map, executed by Prof. C. V. Theis under the direction of Dr. W. R. Jillson, state geologist, was released in preliminary blueprint form on October 15, last. On it are clearly shown all the oil and gas structures of Henderson County, except in the deeply alluviated meanders of the Ohio River touching Evansville and Mt. Vernon, Ind.

"Henderson County adjoins McLean and Daviess Counties on the west," said Doctor Jillson, "and the westward extension of important commercial production as evidenced by the Jack Ratliff well now pumping over 100 bbls. a day in McLean County indicates that several producing pools may be developed in this territory. Leasing is now going forward actively. Henderson County lies north of the important Rough River disturbance and west of the Curdsville fault. A number of well-defined anticlines and domes oc-

(Continued on Page 74)

Griscom-Russell

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THE sectional arrangement of this condenser provides many special operating advantages. Sections can be added to or removed to meet varying capacity requirements. The complete unit is readily transported and re-assembled if necessary to meet changing plant conditions. Inspection and cleaning are greatly facilitated.

There are many additional advantages in the special design and construction of the G-R Sectional Condenser. Its special features are concisely described in leaflet which will be sent on request.

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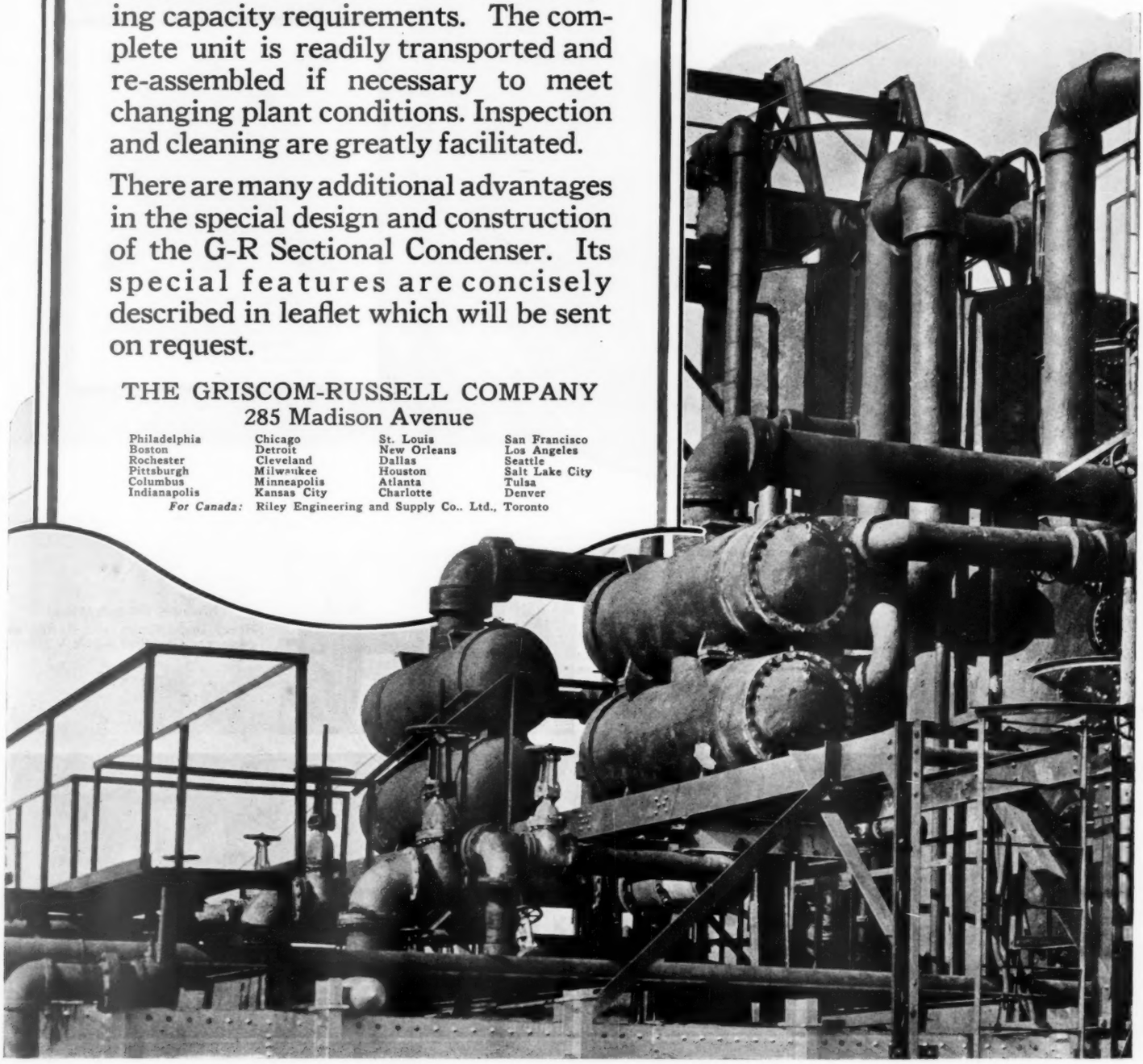

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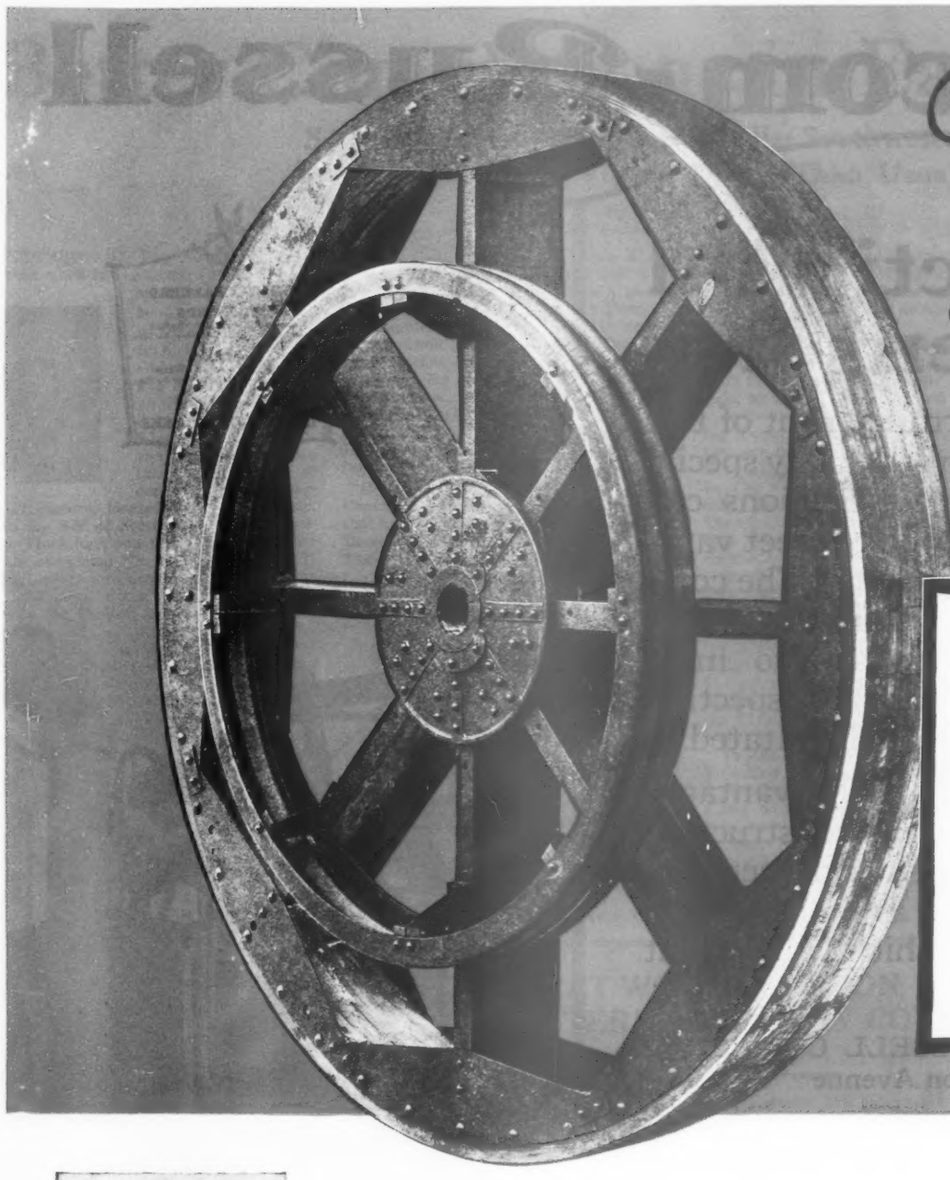
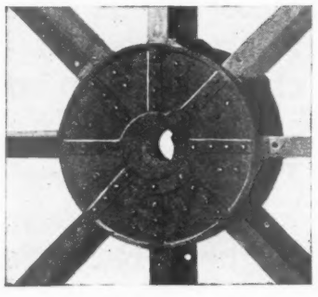
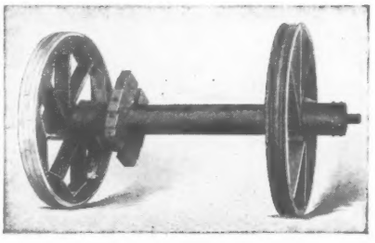




Flange Construction
Rivets hold flange securely. Angle reinforcements give additional strength to spokes. Wheels furnished for all shaft specifications.

Moore Steel Tug Rim
One piece, double V groove, rolled steel tug rim. Diameter 7'. For wooden band wheels.



Moore Steel Bull Wheel
Heavy shaft, shrunk and riveted on gudgeons. One piece double V groove tug.

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*A.P.I. Specification.

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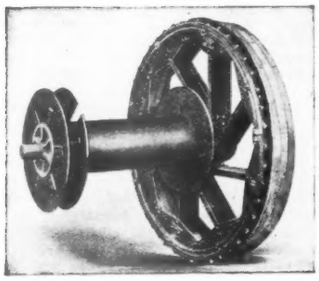

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Built for severe service. I beam type, heavily reinforced. Supplied with 24′, 25′ and 26′ working centers, and for all makes and sizes of saddles.

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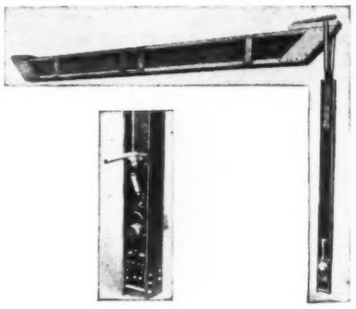
Self-aligning bearing, easily opened or closed by lever. Toggle action prevents opening without direct pull on lever. Made for all sizes and makes of wrist pins and stirrups. Used with wood or steel walking beams.



EQUIPMENT

DALLAS, TEXAS HOUSTON, TEXAS WICHITA FALLS, TEXAS BORGER, TEXAS PARKERSBURG, W. VA.
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Gallia County, Ohio, Wildcat Promising

May Mean Opening of Entirely New Producing Area. Advance Well in Crawford County, Illinois, Interesting

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 12.—Work is growing less in almost every direction of the Central West Field, with the advent of cold weather and it is the season of the wildcatter in a hunt for new producing areas for an early spring drilling campaign. Some drilling will be done in defined territory during the winter, but if talk is any criterion, wildcat work will take the lead. Producing wells in the older defined limits are rather light, but they are worth the expenditure where wells can be hooked to power plants as soon as brought in without any additional cost of putting in new power plants. The Lima Field since last review is credited with 7 completions, Indiana with 1, Illinois 2, and Central Ohio with 5, making a total for the week of 15 completions, 9 being producers, with an initial production of 211 bbls., 3 dry holes and the same number of gas wells. In the Lima area, a 42-bbl. well was found on the Zimmerman farm in Auglaize County, and a natural 35-bbl. pumper on the Bryan farm, in Pleasants Township, Hancock County. A test in Black Creek Township, Mercer County, on the Ross farm, pumped an initial of 40 bbls. in 24 hours, adding a nice area of territory to the older developed portions of the field. A wildcat on the Frank Longemeyer farm in Washington Township, Van Wert County, is in the dry list, only having a very slight showing of oil.

An advance well on the Martin farm in Southwest Township, Crawford County, Illinois, is of some significance, coming in with an initial of 15 bbls., making surrounding territory look interesting for an early spring drilling. The feature of this test is that the oil was found in the Kirkwood sand, which was a heavy producer to the south in Lawrence County.

A wildcat of more than passing interest was found on the Grover farm in Addison Township, Gallia County, which may mean the opening of an entirely new producing area for the Central Ohio Field. Much leasing has been done there and in Lawrence County of late and several wells are under way or being planned.

Buys Gas Property

The Ohio Fuel Gas Co., which was recently granted a franchise to pipe the town of Elmore, 20 miles southeast of Toledo, and in Ottawa County, has purchased the Mountler Gas Co.'s interests in the old line that furnished gas for the town and now has sole control of the natural gas service of Elmore. The Mountler Co. has been serving Elmore with gas for 24 years. Genoa, Oak Harbor, LaCarne, and Port Clinton are also to secure gas within a very short time from the Ohio Fuel Gas Co., as work on mains is going on speedily.

Roxana's New Storage Plant

Work on the big storage plant which the Roxana Petroleum Corp. will build on the property it has acquired along Summit Street and the Wheeling & Lake Erie Railroad, facing on Maumee River, Toledo, Ohio, has been started. The improvement at this time contemplates the construction of six large storage tanks, development of the dock frontage so that oil ships can discharge their cargoes at the new plant and construction of necessary sidetracks is included in the preliminary program. Work on the project started last Monday. The storage plant will be one of the largest in Toledo.

Lima Field

One of the most important finds in the old Lima Field of northwestern Ohio for many months has just been made in a wildcat venture drilled in the northwest corner of Mercer County, near the Indiana State line. This venture was made by the Willshire Oil Co., in the southeast corner of the Juesse Ross 80 acres, known on the oil map as the Joseph Dellinger farm, in the W half of the SW of Section 5, Black Creek Township. Top of the Trenton was found at 1,104 feet and the drill penetrated the sand 49 feet and when put on the pump showed an initial production of 40 bbls. This gives a new area of territory for development work, but whether much drilling will be done until early spring remains to be seen. This wildcat is 5 miles north of Chattanooga, 2 miles north and 2 miles west of the hamlet of Pond, and 7 miles west and one-half mile north of the main town of Rockford.

A second test made by William B. Lawrence and others in the southwest corner of the Thomas Fireovid farm, mapped as the Dave Fireovid farm, in the NE of the NE of Section 21, Union Township, Mercer County, and just a short distance north of the oil town of Mendon, topped the sand at 1,142 feet and went 44 feet in the sand, getting a 5-bbl. pumper. No. 1, drilled on this farm last month, and in the northwest corner of the lease, had an initial of 14 bbls.

A wildcat drilled by Syl Metzger in the northeast corner of the Frank Longmier 83 acres, in the W half of the NW of Section 25, Washington Township, Van Wert County, just west of Delphos, dropped into the dry hole column, there being but a slight showing of oil. Top of Trenton sand was found at 1,226 feet and drilled 27 feet in, where a heavy dose of salt water was encountered, and it has been abandoned.

Auglaize County as usual developed a couple of nice producers. In Logan Township, the Four Leaf Oil Co.'s No. 3 well, 1,040 feet from the north line and 1,050 from the west line of the F. E. Zimmerman, mapped as the Charles Zimmerman farm, in the N half of the NE of Section 20, 2 miles north and 2 miles east of Kossuth, 4½ miles north and 2½ miles west of Buckland, and in a territory that has been sparsely developed. Top of sand was found at 1,227 feet and drilled 42 feet in sand; it produced an initial of 42 bbls. In the same township, Wesley Sprague and others' test, about 3 miles north of Buckland and in Section 26, produced an initial of only 2 bbls.; sand was found at 1,174 feet and the oil at 48 feet in the sand. In Salem Township, same county, the Ohio Oil Co.'s No. 8 well, 250 feet from the south line and 400 from the east line of the Anna Warner farm, in the NE of Section 3, and about 2 miles southwest of Kossuth, tapped the Trenton sand at 1,142 feet and went 83 feet into the sand, securing a well with an initial of 20 bbls.

North of McComb, in Pleasants Township, Hancock County, and northwest of Findlay, the Bath Township Oil Co.'s No. 7 well, 560 feet from the north line and 880 feet from the west line of the John A. Bryan farm, in the SE of Section 14, showed a natural production the first 24 hours of 35 bbls., with sand topped at 1,387 feet and drilled 38 feet in the sand.

Indiana

While the Indiana Field leads all others of the Central West group in wildcat work, only one completion was reported for the week, which was the Ohio Oil Co.'s third well, 400 feet from the south line and 300 from the west line of the Dora Edwards farm, in the southwestern part of the State. Top of sand was found at 1,573 feet and drilled but 9 feet in the sand, resulting in a 2-bb'. pumper. In Madison Township, Pike County, same company abandoned No. 7 on the Sarah J. Thomas farm, Section 30.

In the old Trenton Rock area of the eastern portion of the State, a few wells are under way that should reach the coveted spot before the close of the month. In Chester Township, Wells County, the Lawrenceville Drilling Co. has a test under way on the Twibell farm, Section 18. In Jay County, Penn Township, George Northrup is drilling a test on the Wabash Bank land, Section 17. Nick Masters is about due in with a test on the Charles and William Kent farm, in Pike Township, same county, and about one-half mile east of the Hotmier Pool, which developed some large producers a few years ago. Waterloo Oil & Gas Co. is drilling ahead at No. 7 on the C. E. Brinkerhoff farm, Section 31, Bear Township, and in Knox Township, same county, the Knox Oil Co. is drilling a wildcat on the Earl Kessler farm, Section 16.

In Monroe Township, Randolph County, not far from Parker City, Wesner and others are working at a test on the Joseph Meeks farm.

Illinois

The most important oil find in Illinois during the week was in the extreme southern portion of Crawford County and a half mile north of the Lawrence County line and a short distance south of the Embarrass River, drilled by the Dark Bend Oil Co., formerly reported as the Embarrass Oil Co., in the northwest corner of the J. C. Martin 40 acres, mapped as the A. W. Martin farm, in the SE of the NE of Section 24, Southwest Township. This venture was drilled to a total depth of 1,551 feet, getting its oil in the Kirkwood sand and credited with an initial production of 15 bbls. The finding of oil in this well-known formation shows that something better may be looked for to the north in portions of Crawford County, for the Kirkwood sand has proven a good staying sand in Lawrence County to the south. This test is about midway between the big fields of Lawrence and Crawford Counties, where in the early days was considered as of little value for a distance of about 3 miles north and south, and this new find may mean that the two well-known producing counties may yet be connected in one long continuous producing area.

In Wabash Township, Wabash County, the Koker Creek Oil Co.'s No. 3 well, 200 feet from the south line and 600 from the east line of the A. A. Gher in the SE of Section 1, found a dry hole at a depth of 1,364 feet.

In Lawrence Township, Lawrence County, the Ohio Oil Co. abandoned No. 16 on the J. A. Seed farm, Section 10, and in Bridgeport Township did the same with No. 11 on the James Lewis No. 2 farm, Section 32.

Central Ohio

The feature of the Central Ohio Field is the finding of a fairly good gas well in the second Berea sand on the Grover farm, Section 6, Addison Township, Gallia County, and the activity in leasing in both Gallia and Lawrence Counties. Large blocks of acreage have been leased in Gallia County by Ralph Brothers, Leonard Oil Co., the Atha-Webber Co., Ohio Fuel Co., Pure Oil Co., and others, and numerous tests are being planned.

Very few completions were reported anywhere in the large gas belt during the past several days. In Hardy Township, Holmes County, the Empire Gas & Fuel Co.'s second well, 405 feet from the north line and 460 from the west line of the William Watts 153 acres, Lot 13, shows for about 250,000 feet of gas and about 5 bbls. of oil initial. In Kilbuck Township, same county, the East Ohio Gas Co.'s test, 670 feet from the north line and 660 from the east line of the D. N. Snow 40 acres, Lot 18, is reported dry. In Richland Township, same county, the Logan Gas Co.'s test, 660 feet from the north and east lines of the Malissa Manchester 100 acres, Section 14, is said to be a very good gas producer, far above the average.

Gallia County

Gallia County, although practically surrounded for years with both oil and gas production, has been left open and remained undeveloped, but things have changed and the county is to get a good testing, as there is now keen interest shown throughout the county. Several of the large operating concerns and geologists have looked over the county in a thorough manner and consider it worth many tests. The producing sand to a large extent, so far as known, is the second Berea pay found at approximately 1,600 feet in depth. With such well-known companies as the Ohio Fuel Supply Co., Pure Oil Co., Ralph Brothers, Inc., Leonard Oil & Gas Co., the Atha-Webber Co., Gordon Oil Co., and others, the territory will no doubt be well taken care of in the way of test wells. Bonus prices prevail for acreage, but not as large as in territory where wells have been found. The Atha-Webber Co. of Columbus, Ohio, has secured a block of 56,000 acres. This company will start at once a deep test on the Mary L. Spear farm, in the NW of Section 1, Walnut Township, Gallia County. Ralph Brothers, Inc., and the Leonard Oil & Gas Co. are putting down a deep test to the Clinton sand, in the NW of Section 23, also in Walnut Township. Several locations have also been staked out for tests in Addison and Gallipolis Townships, and tests in these two townships will drill for the second Berea sand.

In Addison Township of this county, the Gordon Oil Co.'s test on the Mary Grover farm in Section 6 is estimated good for 570,000 feet of gas in the second Berea sand pay. Same company is starting another test on the W. H. Reynolds farm, Section 15, same township.

Lawrence County

Unknown parties are drilling a deep test on the Otis Ellcessor farm, in the SW of Section 18, Mason Township, Lawrence County, and at last report had reached a depth of 2,500 feet and going down to test the Clinton sand.

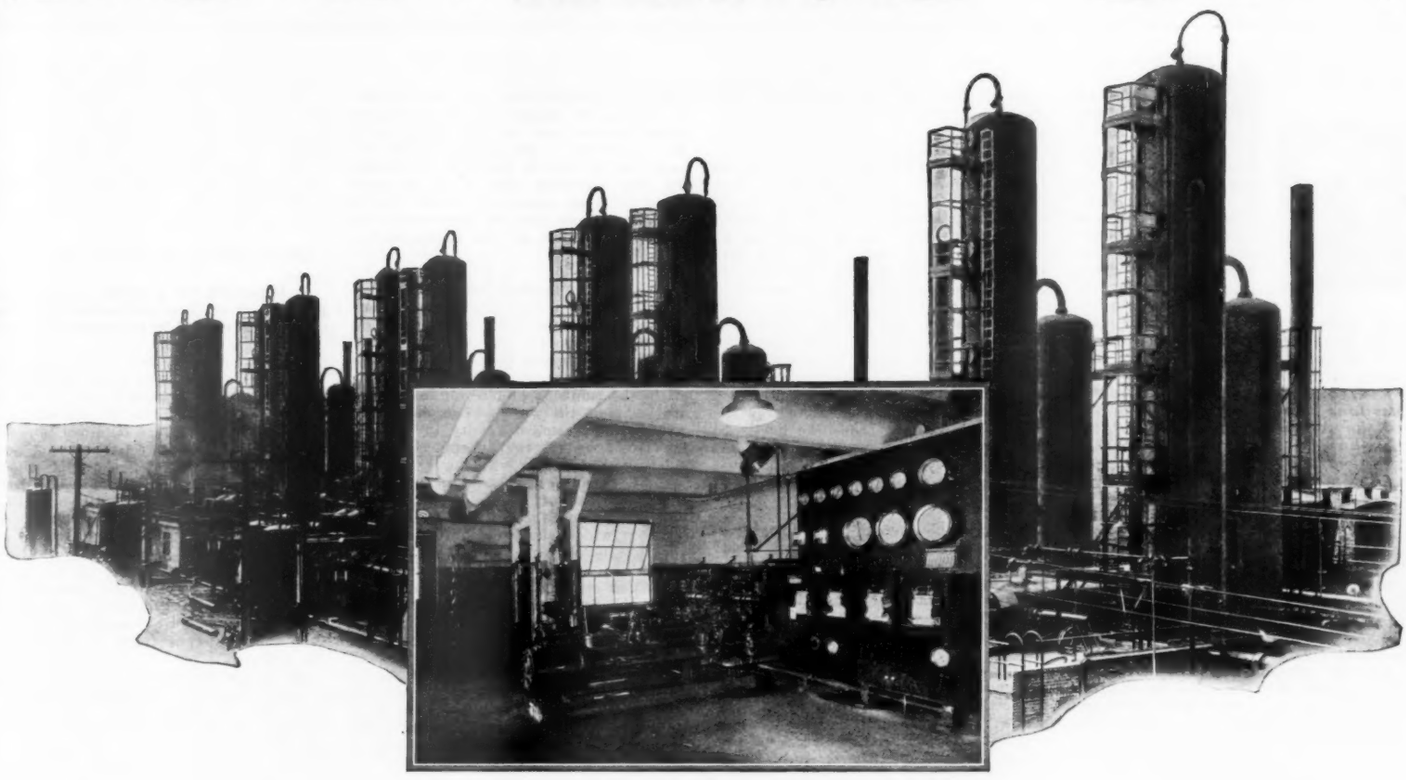
Michigan

Two completions are reported from the Saginaw Field, bith being producers. The Sun Oil Co.'s No. 4 well on the Pere Marquette right of way, near the freight house on West Genessee Avenue, struck top of Berea sand at 1,801 feet and drilled 16 feet of sand and shot the hole, which is estimated at 20 bbls.

The test of Crowley & Carr on the Curtin Brothers property on Phelan Street in East Saginaw, and east of Ward Street, is reported to have struck sent a few feet into the sand where a the top of the Saginaw sand at a depth close around 2,355 feet. The well was sent a few feet into the sand where a nice gas pressure was found followed by oil. While swabbing, the well put 40 bbls. into tankage the first day, making it the feature of the field, and shows that commercial wells may yet be found with regularity in the deep Saginaw sand. This well is to the east of the Berea sand field proper.

Norris & Smith are making arrangements to drill a second test on their large block of acreage in Section 10, Conway Township, Shiawassee County, to further test the area, as they got a showing of oil in their first test in Section 16, same township, which is claimed the Berea sand at a shallow depth of 600 feet, but not in commercial quantity, and was abandoned.

LOOMING UP!



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Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

WATER DRIVES

Has the water drive been used anywhere except in the Bradford Field of Pennsylvania? I would be glad to get what information you can give me about this method of getting oil—R. M. A.

An attempt was made to use water drive in one of the Kansas fields, but the property on which it was tried was almost ruined. An uncontrolled water drive has been in operation in the Cushing Field for several years. Details regarding it are contained in a United States Bureau of Mines publication, which you can obtain by writing to the Bureau of Mines station in Bartlesville, Okla.

Use of the water drive in the Bradford Field is said to have originated through defective plugging of an abandoned well, which allowed water to intrude in the producing sand. The production of nearby wells began to increase. New drilling operations in the Bradford Field are preceded now by putting down a row of water wells across a zone of water flow previously ascertained. Then the oil wells are drilled at right angles to the row of water wells and on either side of them. As water encroaches upon the oil wells nearest to the water wells, additional oil wells are drilled, the first oil wells in turn becoming water wells in some instances.

Old wells in the field have been revivified by use of the water drive. In this case a row of water wells is drilled in a direction assumed to follow the line of the water flow through the sands. Some of these old wells which had been producing one-quarter of a barrel or less of oil a day began to yield as high as 10 bbls. after the water drive had been applied. The water advances at the rate of 50 to 100 feet a year in the sand underground, pushing oil ahead of it. In the course of time, it is to be seen, the water itself reaches the well and when that time comes the well produces no more oil.

This flooding process hardly could be expected to be successful except where the sand is unusually porous and where the gas energy has been exhausted. Scientists say the water drive would be a failure in sands of less than 10 per cent porosity. It is not believed that the method would work in limestone formations.

It is of interest to note in this connection that the United States Geological Survey had cores of the Bradford sand taken and it found that wherever the oil had been "drowned out" by the water the cores showed a fluid content of 64 parts oil to 34 of water, indicating that after producing oil by the usual methods and then using the flooding process about two-thirds of the original deposit of oil still remained in the ground, waiting for scientists to invent some method of recovering it. It would seem clear that repressuring and methods of recovery still to be worked out should be employed before resort to the water drive, for the water drive virtually ends the likelihood of further recovery.

AVERAGE LIFE OF WELLS

What is the average life of the average oil well in the Mid-Continent Field? How long does it take flush production to reach the point of settled production? After a well has reached settled production, what is the average yearly percentage of depreciation?—L. F. C.

Answers to these questions are virtually impossible because, for practical purposes, there is no such thing as an average well. Extended investigation would reveal to us with a fair degree of precision the average life of the average oil well producing from a given sand in a certain pool, as for example, the Wilcox sand in the Earlsboro Pool.

The time required for flush production to reach the point of settled production varies in different areas and in different sands of the same area.

Factors involved in the first two questions figure in the third also, with the additional one that the word "depreciation" may mean different things in different pools. For example wells half a century old and still producing oil in profitable quantities in the fields of western Pennsylvania would have been abandoned long ago if they were in the Stroud Field of Oklahoma and producing only the barrel or less daily that makes a well valuable in Pennsylvania. The difference here is in the grade of oil and in the cost of lifting it to the surface, the depth of the sand being an important factor.

ASCERTAINING SLOPE OF HOLE

Do you know of any simple method by which a man can determine whether a well is being drilled straight down and, if it is not, just how far off vertical the hole is?—R. C. M.

The slope of a hole may be ascertained by the use of a container made of copper and of a size permitting it to fit snugly within the bottom of the bailer, the dart having been removed. A bottle of known diameter is placed inside this container. In the bottle is hydrofluoric acid of a certain consistency. The container then is lowered into the hole. The hydrofluoric acid is of such strength that after standing about 15 minutes it etches the glass bottle. When the bailer is withdrawn to the surface and the bottle removed the slope is shown plainly by the etching left on the glass bottle by the acid. The deviation from vertical at the point to which the bottle was run is calculated by simple trigonometry.

This method of determining the exact slope of a hole is presented fully with illustrations in an article by E. W. Williamson and Eugene Siggins in The Oil and Gas Journal for June 16, 1927.

LIME AS SEPARATOR

I have been told that lime can be used in settling the water out of an oil-and-water mixture such as some of my wells are producing. My production is not large and if there is any way of separating this emulsion that I get without going to great expense I would like to know it. Have you any information on the value of lime in this connection?—J. C. D.

The effect of introducing lime into the mixture that you are getting from your wells would be to cause a chemical reaction between the lime and the water whereby heat would be generated. This would tend to lower the viscosity of the oil in the emulsion and result in its separation from the water. You should expect to meet some difficulty in separating from the oil the substance formed when the lime reacts with the water. The use of lime is discussed in a United States Bureau of Mines Report of Investigation, Serial No. 2,688. This publication, which should be of interest to you in this connection, may be obtained by writing to the United States Bureau of Mines station in Bartlesville, Okla., or to the Superintendent of Documents, Washington, D. C.

Preparations designed to dissolve the oil-and-water mixture that is bothering you are manufactured and sold under various trade names. You might consider using them rather than lime, with its attendant difficulties. They are said to perform the work satisfactory and to be relatively inexpensive.

CEMENT-AND-ASBESTOS PIPE

You would oblige me by giving me any information you can about the use of cement-and-asbestos pipes for oil service. I have been told that they have proved a success in other fields, that they are superior to reinforced concrete pipes, fully as strong as iron pipes, do not corrode, last longer and are cheaper, especially in countries where iron has to be imported.—C. Y. C., Havana, Cuba.

An asbestos-cement pipe has been brought out in Italy by the "Eternit" Pietra Artificiale, of Genoa, and it is reported that this kind of pipe now is being used in that country for water and gas mains and for other purposes. Manufacture of asbestos-cement pipe has been taken up in England and Spain also, it is said. Inquiry has disclosed no instance in which this kind of pipe has been tried in oil fields of the United States, but pipe line experts say that while it is possible it might be used satisfactorily for municipal purposes, such as water maine, there is no reason to believe it preferable in any circumstances to the iron and steel pipe now in use in this country. Your reference to the cheapness of asbestos-cement pipe in countries where iron has to be imported makes it pertinent to point out that the United States does not have to import iron.

TELESCOPE STRINGS OF TUBING

I never have tried to use telescope strings of tubing in my wells, but I would like to do it, and I would like to know how you determine the sizes to use and the length of each size to use.—F. O. N.

Effort of obtain definite information in answer to this question has resulted in semifailure. Apparently there is no established rule for determining the correct length of each size of tubing to use. A common method is to use approximately equal lengths of each size, though sometimes a piece of the smaller size longer than the others is inserted at the bottom of the tubing string. In wells flowing approximately 1,000 bbls. a day on the gas lift a string of tubing consisting of equal lengths of 2-inch, 2½-inch, 3-inch, 3½-inch, 4-inch and 5-inch tubing has been used with success.

This department would welcome any information from field men or others that would make possible a fuller answer to this question.

DETECTING PRESENCE OF OIL

Is it possible for a driller to detect the presence of oil in a sand when 2,500 feet of water is carried in the well?—D. L. J.

It is understood from your question that you would like to know whether, if oil were present in such a well, it would rise to the top of the water and whether, if a sand sample were obtained, any oil present could be detected in the sand sample. In rotary drilled wells, where the well is filled with mud while drilling, oil sands often have been drilled through without any indication of oil being noted in the rotary mud.

With regard to the possibility of oil showing up through water of the depth you mention, it has been observed by drillers that oil often will accumulate on the surface of the water when more than 2,500 feet of fluid is standing in the hole.

As to the likelihood of detecting oil in a sand sample, it is believed virtually impossible to wash an oil from a sand entirely. So by placing a small quantity of the sand in either chloroform or ether, it should be possible to discern the presence of oil if it exists there. The presence of even a small trace of oil would color the solvent.

SAGINAW FIELD PRODUCTION

Kindly give me any data you have on the total production up to the present date of crude oil in the Saginaw Field and also where the majority of this crude is disposed of.—E. N. L.

An estimate of the total amount of crude petroleum taken from the Saginaw Field up to the first of November, 1927, places it at 478,900 bbls. In the first six months of the present year the production, according to government figures, was 216,000 bbls. Most of the oil from this area is bought by the Sun Oil Co. and transported to its refinery in Toledo, Ohio.

CHERRYVALE FREAK GAS

Could you give me any information regarding the freak gas reported to have been found in the Cherryvale district. Labette, Kans.?—I. R. T.

The gas produced in the Cherryvale district comes from shallow sands and does not contain any gasoline. An analysis of it showed that it contained 96.5 per cent methane, 0.8 per cent CO_2, 2.7 per cent inert matter and no free oxygen. The heating value is approximately 900 B.t.u. The wells in the district produced from 20,000 to 200,000 feet per day. The gas is utilized as fuel for general domestic use and for a refinery.

FINDING DEPTH OF WELL

What method for finding out the depth of a well is the most accurate?—R. L. E.

The Halliburton measuring device probably affords the most accurate method known at this time for measuring a well. Measuring in over the derrick with a sand line, if carefully conducted, is the most accurate of the ordinary methods.

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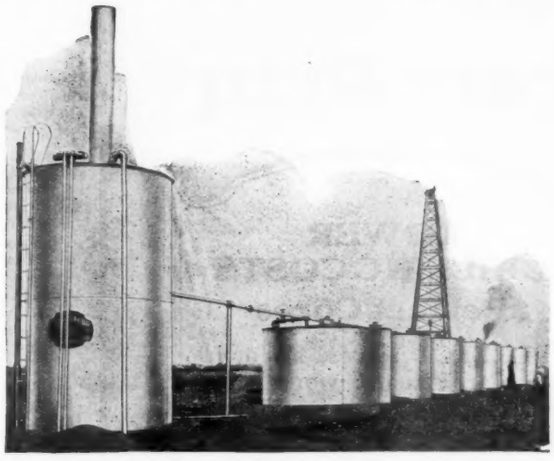
Check the equipment in which you are interested, tear out and return this page to us, and we will send complete information.



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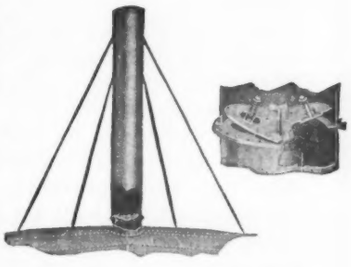
Send for Parkersburg Bolted Steel Tank Catalog for complete data on flow tank installations.



The flow tank stack is 18" diameter, 7 long, and is supplied complete with guy wire and lugs for connection to the tank deck. When preferred, stacks can be supplied less the valves

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KENTUCKY-TENNESSEE

(Continued from Page 66)

cur in this district. Several small shallow oil wells have been drilled a few miles west of Corydon." The new structural map of Henderson County may be secured by addressing the Director of the Kentucky Geological Survey, Frankfort, Ky.

Eastern Kentucky

The only completion reported from the eastern Kentucky area was made by C. R. Dulin, when he drilled in a nice gas well near Burning Springs in Clay County, Kentucky. F. P. Crawford is now drilling a test well on Crane Creek, in the same county. Considerable gas is being produced in this county which is not far removed from the Kentucky-Tennessee state line.

Western Division

In the western division of Kentucky, considerable activity prevails in advance of production in Ohio, Daviess and McLean Counties. Just now there is a rush for acreage in southern Daviess and also in the immediate territory across the line in McLean County, brought about by the good well drilled by the Dimmick Brothers on the Ratliff lease, near Livia, in McLean County. The Ratliff well starting off at 110 bbls. production the first 24 hours, is said to be holding up to a good daily average. This is the deepest producing well in what is known as the Tri-County Field of Hancock, Ohio and Daviess Counties, of which McLean County is now a part. Another area that is attracting attention is near the town of Panther, in Daviess County, and several miles west of the Ratliff well. The Ohio Oil Co. has secured extensive holdings in the Panther area and in its first attempt found an oil sand with a fair showing at a shallow depth of 155 feet, but the well is being drilled deeper in hopes of finding a heavy pay sand around a depth of 1,000 to 1,450 feet. The sand in which the Ratliff well found its good pay around 1,420 feet is a different sand than the Jackson, Jett or Barlow, in which the bulk of the production in the Tri-County area is found and therefore it has been named the Dimmick sand. The oil is a 37-gravity crude and said to be a little above the gravity of other parts of the field.

Sunnydale, to the southeast of the Ambrose Pool in Ohio County, is showing more activity since the Wood Oil Co. brought in two good producers on the J. C. Smith 151-acre lease. No. 2 on this property produced an initial of 150 bbls. at a depth of 408 feet and No. 3 was good for 100 bbls. at 435 feet. Earl Patton's No. 3 on the Mrs. Mary E. Wilson 174 acres, same pool, did 100 bbls. initial at 450 feet. Such producers as those mentioned give renewed hopes to those holding acreage in the Sunnydale area. All operators are drilling only as they are required for offsetting to protect lease lines.

The low price of oil is holding back full operations in the western division of Kentucky as in all fields of the country. Wildcatting is the slogan for the winter months in Kentucky, which means the operator is looking for a foothold in some of the out of the way spots for early spring operations. The Illinois Pipe Line Co. is connecting up wells over the field it serves as fast as men can do the work.

Ohio County

The real producer of the week was when Daugherty and others drilled in their No. 3 well on the Hill Rhodes 150 acres, westward from the Weller and Rodney Taylor farms, in the Ambrose Pool, for a 300-bbl. initial producer, the best completion in the pool for several weeks. No. 4 on the Hill Rhodes and No. 8 on the Cora Wells are nearing the pay sand.

The Creek Drilling Co. has added another good producer to its number in the Ambrose Pool by drilling in No. 12 Fannie Lake 100 acres for 200 bbls. This company's No. 1 on the Bartlett heirs farm, in the same pool, is a 100-bbl. initial producer. In this hole a string of 743 feet of casing was set, sand at from 744 to 792 feet and drilled to a total depth of 796 feet and given a 150-quart shot. No. 2 same farm is under way as is No. 13 on the Fannie Lake.

S. A. Russell's second venture on the A. P. Kelly 330 acres is said to be showing for around 30 bbls. initial.

The Wood Oil Co.'s No. 20 on the Mary J. Elmore 100 acres, in the Ambrose Pool, is reported showing for 150 bbls. or better, with No. 21 starting. This is one of the rich producing farms of the pool.

French and others are reported in at a test on the Ben Taylor farm, west of the further west production of the Ambrose Pool, which proved a rank duster.

A dry hole is reported drilled by Engle and Huff on the Jane Davis farm, and another for these parties in No. 2 on the Everett L. Chapman farm, near Clear Run.

Raydure and Richenbrough's No. 1 on the Plus Taylor farm is also a dry hole.

Creek Drilling Co.'s No. 10 on the Sally Early 112 acres, in the Ambrose Pool, is estimated at 50 bbls. initial.

In the Midkiff Pool, the Penn-Indiana Oil Co.'s No. 7 on the C. A. Kelly 260 acres showed an initial of 40 bbls. In this well a string of 380 feet of casing was set, sand at from 380 to 452 feet and went to a total depth of 461 feet.

In the Sunnydale Pool, Tresher & Shouse are drilling No. 1 on the Mark Renfew 53 acres. George Boles is drilling No. 1 Emil Estridge farm, and Earl Patton is drilling No. 5 on the Mrs. Mary E. Wilson 194 acres, same pool. Unknown parties have a machine in for a test on the Charles Carden farm, near Dukehurst.

Daviess County

D. Bolling's test on the Miller, Hazel and others property, one-half mile north of a small producer on the Mattingly farm in Daviess County, found a nice volume of gas, but by a little deeper drilling has what is called an initial producer of around 10 bbls.

Doctor Buckner's test on the Henry Speak farm, southwest of Pellville, is reported a duster.

S. J. Patrick, a former operator from Salyersville, in the eastern portion of Kentucky, has invaded the western division and is drilling a test on the Burns farm, in Brown Valley, near Utica. Percy Jolly, Cleveland, Ohio, operator, is drilling a wildcat on the Tom Stevens farm, same county, and about 3 miles from the drilling well of Mr. Patrick. Should these two wells, or even one of them, prove a commercial producer of any size, there will be a heavy development in that area several miles south of Owensboro.

Warren County

W. B. Cauble drilled a third test on the J. C. Davenport farm, a mile north of Bowling Green, in Warren County, and got a dry hole at 915 feet.

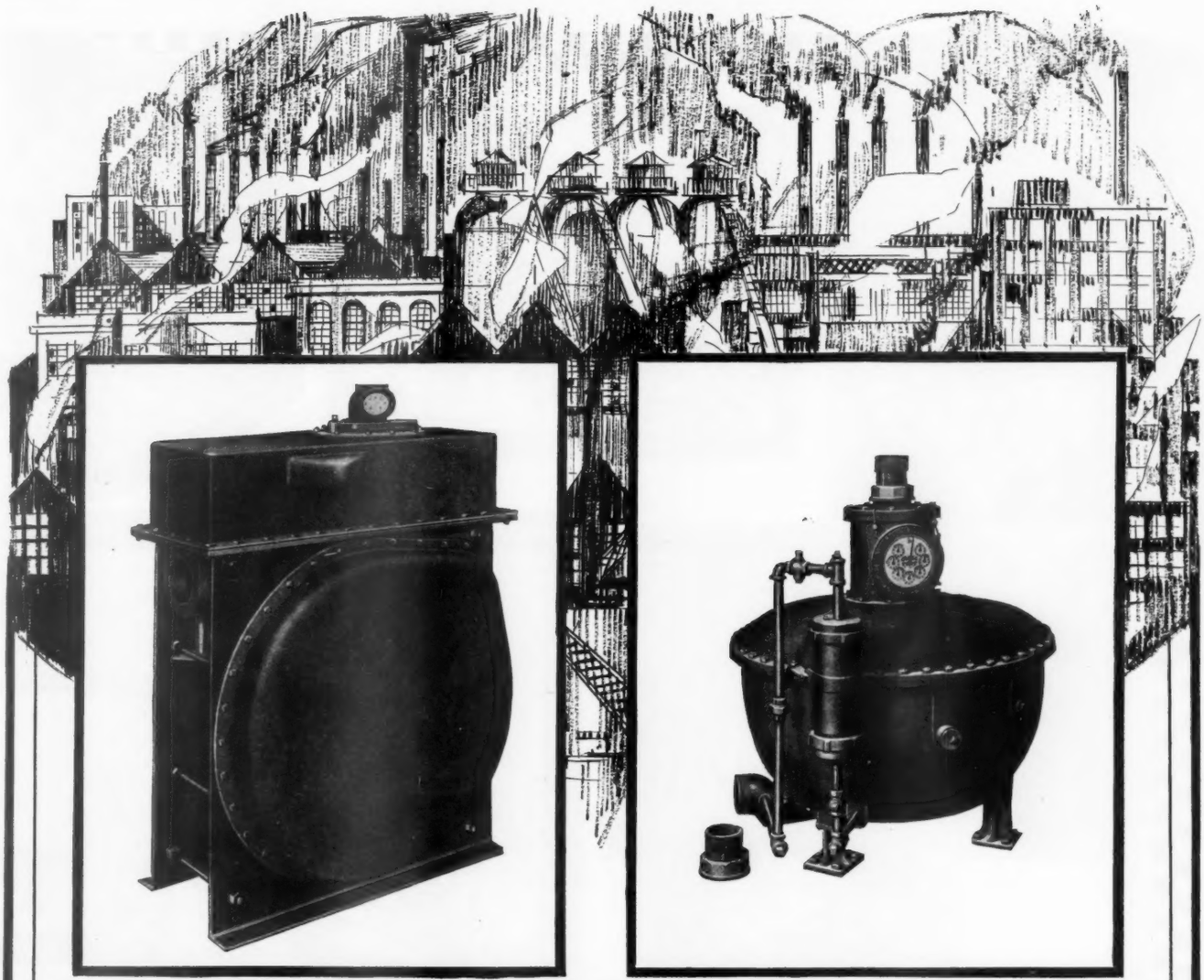
J. L. Jenkins drilled a well on his property in the corporate limits of Bowling Green, and got a dry hole at 700 feet.

MAGNOLIA LARGE BUYER

The Magnolia Petroleum Co.'s pipe line statement for October, showing runs, shipments and stocks of crude oil in Kansas and Oklahoma is as follows:

	Month Bbls.	Daily Av. Bbls.
Runs	2,550,556	82,271
Shipments	1,818,809	58,671
Stocks	6,753,353	

Compared with its September statement for the same states the report indicates an increase of 22,255 bbls. per day in runs but a decline of 2,077 bbls. a day in shipments. Its crude stocks increased 690,642 bbls. in the course of the month. Its runs from the general Seminole area in October amounted to 1,564,813 bbls., or a daily average of 50,478 bbls. It has been a very active buyer as well as a large producer of crude in the Seminole Field and of late it has been especially active as a purchaser. It is evident that the company is anxious to get its share of high-grade crude oil while it is possible to do so, as the next flood of oil will be the less desirable sulphur-laden oil of West Texas, which will come into the market largely in 1928 and 1929.



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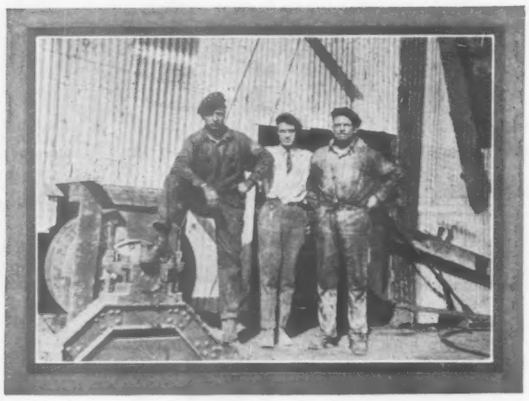

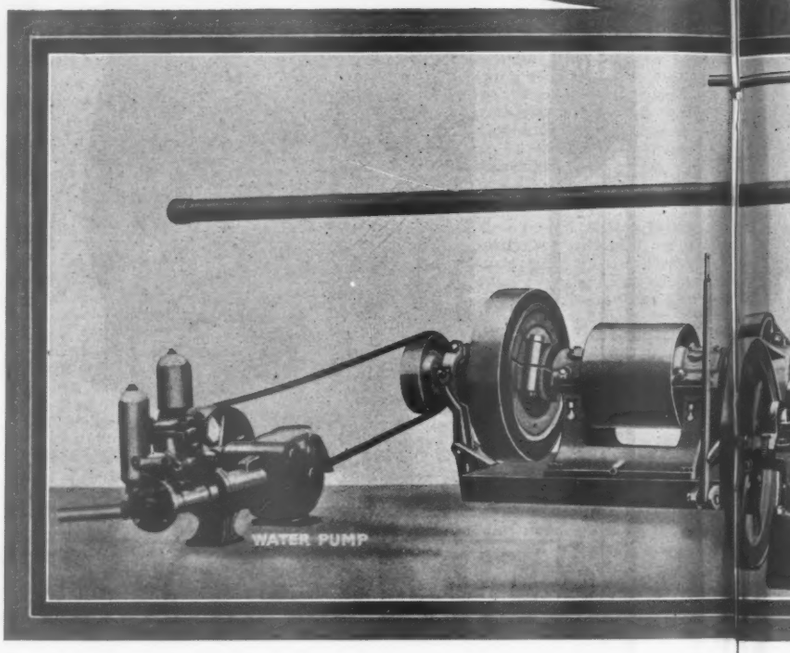

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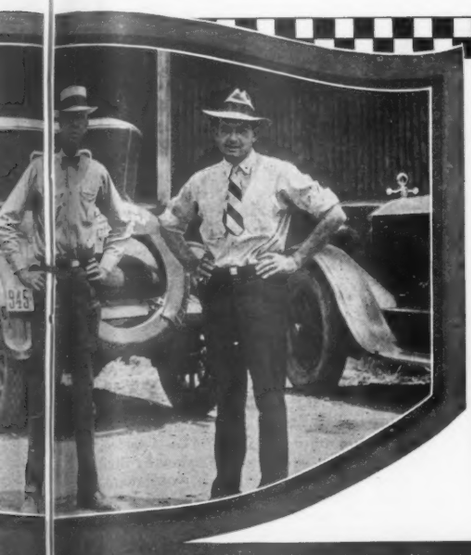

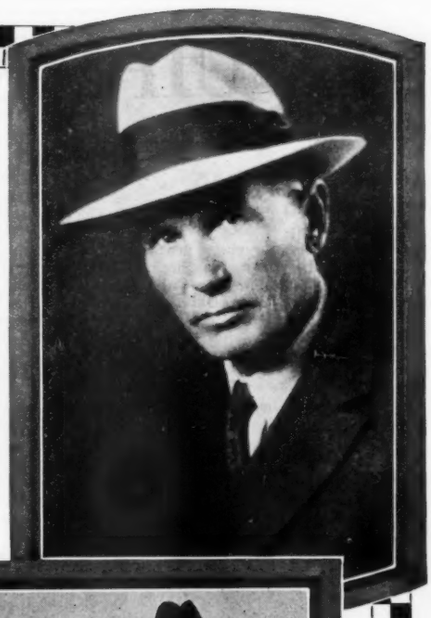

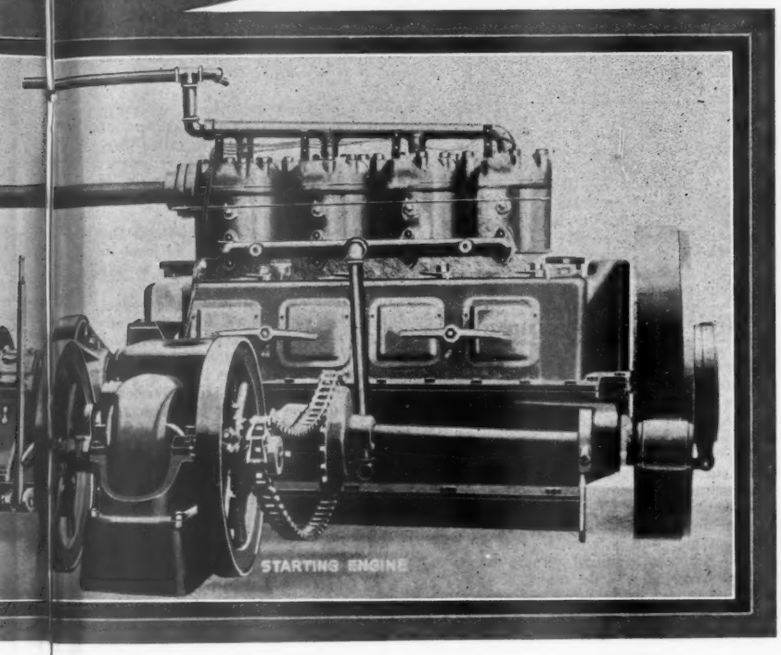

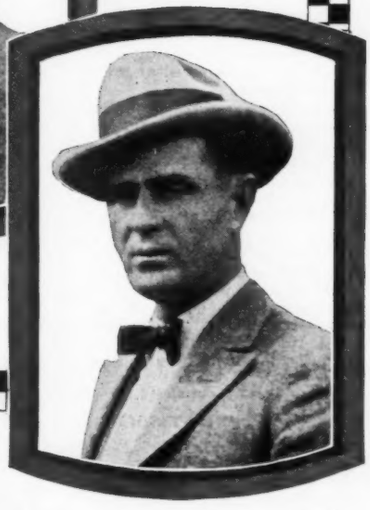

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(JUNIOR and SENIOR)

EQUIPMENT AND SUPPLIES

WILLIAM G. HANRAHAN MADE SALES MANAGER

William G. Hanrahan, for many years identified with the oil industry, has been appointed manager of sales for the Gaso Pump and Burner Co. of Tulsa, Okla.

Mr. Hanrahan's experience has included service in various branches of the business. He was born in Olean, N. Y., in 1891, and is a member of a family which has contributed several executives and officials to the oil business.

Leaving Olean at an early age, Mr. Hanrahan was employed successively by

William G. Hanrahan

the Indiana Pipe Line Co., Ohio Oil Co., Texas Pipe Line Co., Standard Oil Co. of Louisiana, and the Foster Oil Co., of Tulsa. For several years he was superintendent of gasoline plant construction for the Sinclair Oil & Gas Co. and his most recent connection was in the land department of the Vacuum Oil Co.

His wide experience and extensive acquaintance afford him an excellent background for sales work.

L. D. Armstrong, general manager of the Gaso company, formerly handled sales for the concern, but rapid growth has necessitated having a manager to confine his activities to sales work exclusively. The capacity of the Gaso plant has almost been doubled within the last two years.

Mr. Hanrahan has three brothers connected with the Humble Pipe Line Co.- Ralph V. Hanrahan, president; J. C. Hanrahan, superintendent; and T. R. Hanrahan, superintendent. Two other brothers, J. J. Hanrahan, and E. J. Hanrahan, are officials of the Texas Pipe Line Co.

OIL MACHINERY PLANT SOLD

The Fort Worth Drilling Tool Co. recently sold its plant in South Main Street, Fort Worth, Tex., to the Fort Worth Well Machinery & Supply Co., Inc., manufacturers of portable well drilling machinery, with offices and warehouses at 57-63 Jennings Street and factory at 1300 East Broadway, Fort Worth. The South Main Street plant will be used as a warehouse for heavy machinery and oil field supply materials for the present. The mattery of merging the two plants now owned by the company is under consideration by the officers, A. H. Herdman, president; W. B. Brown, vice president; H. G. Parr, secretary-treasurer and manager.

FIRE EQUIPMENT FIRMS MERGE

The American-LaFrance Fire Engine Co., Inc., of Elmira, N. Y., has acquired the assets and good will of the Foamite-Childs Corp. of Utica, N. Y., and the two companies will be combined under the name of the American-LaFrance and Foamite Corp.

For 82 years American-LaFrance Co. has been recognized as a leader in the development and production of modern firefighting equipment.

Foamite-Childs Corp., whose organization dates back to 1897, has built up a fire protection service of wide application. Besides manufacturing fire-extinguishing appliances, this company developed a foam method of fire-extinguishing (Foamite protection).

COMPANY CHANGES NAME

The name of the Racine Radiator Co. has been changed to Perfex Corp. because of change in location. "Perfex" is the registered trade-mark. The company's business is in heavy duty type industrial radiators. The plant has been moved from Racine to Milwaukee where better shipping facilities were available.

AGENT FOR WALWORTH VALVES

The James E. Degan Co. of Detroit, wholesaler of steamfitting and mill supplies, announces that it has become a distributor of iron, brass and steel valves manufactured by Walworth Co. for all service requirements on steam, water, gas, air or oil lines.

DISTRIBUTOR FOR TEXAS

The Maintenance Engineering Corp. of Houston, Tex., has been appointed distributor for the United Air Cleaner Co. of Chicago, for the State of Texas.

BULLETINS AND CATALOGS

A 24-page catalog on Bethlehem Pulverizers is distributed by the Bethlehem Steel Co., Bethlehem, Pa.

Oakite News Service is published by the Oakite Products, Inc., "in the interest of those who have cleaning problems."

The Hercules Record, published by A. Leschen & Sons Rope Co., St. Louis, tells of large projects in which the company's products are used.

NEW LUFKIN BABY UNIT

The Lufkin Foundry & Machine Co., of Lufkin, Tex., manufacturer of the Lufkin worm-gear pumping units, has added to its line a baby unit for light wells up to 2,500 feet in depth where

individual unit is desired in place of powers, and more especially in the rough country of West Texas.

Lufkin Units now are built in four sizes, the 6½-inch Heavy Duty, 5½-inch Intermediate, 4½-inch Standard and the 3½-inch Baby Unit, so that they can meet all conditions in well pumping.

The Baby Unit is built along the same lines as the larger.

OAKITE SERVICE MEN MEET

Oakite Products, Inc., completed its nineteenth year of industrial cleaning service when the field service men, technical staff and executives met in the general offices in New York, November 7 to 10, inclusive. Field representatives from 36 states and Canada discussed their problems and exchanged experiences in connection with their work, which ranges from the cleaning of phonograph needles to locomotives, and silk shirts to submarines. Sixteen technical papers were presented covering a wide range of subjects on cleaning and washing operations.

APPOINTMENT ANNOUNCED

The Lincoln Electric Co., manufacturers of "Linc-Weld" motors and "Stable-Arc" welders, announces the appointment of E. A. Thornwell of Atlanta, Ga., as its representative for Georgia and eastern Tennessee. Mr. Thornwell has been associated with the electric industry in Atlanta and Pittsburgh, since his graduation in 1904 from Clemson College, South Carolina. John Van Horn, factory engineer for the Lincoln Electric Co., will be Mr. Thornwell's assistant.

EMSCO BUYS D & B PUMP & SUPPLY CO.

E. M. Smith, president of the Emsco Derrick & Equipment Co. of Los Angeles, Calif., announces that the company has purchased outright the plants, equipment, branch stores, products, stocks on hand and patent rights of the D & B Pump & Supply Co., whose main factory and general offices also are in Los Angeles. All operations and transactions of the D & B Pump & Supply Co. will be under the control of the Emsco Derrick & Equipment Co.

The Emsco Derrick & Equipment Co. is one of the largest manufacturers of oil well equipment, including steel derricks and machinery for drilling operations. The D & B Pump & Supply Co. is one of the largest manufacturers of oil well pumping equipment.

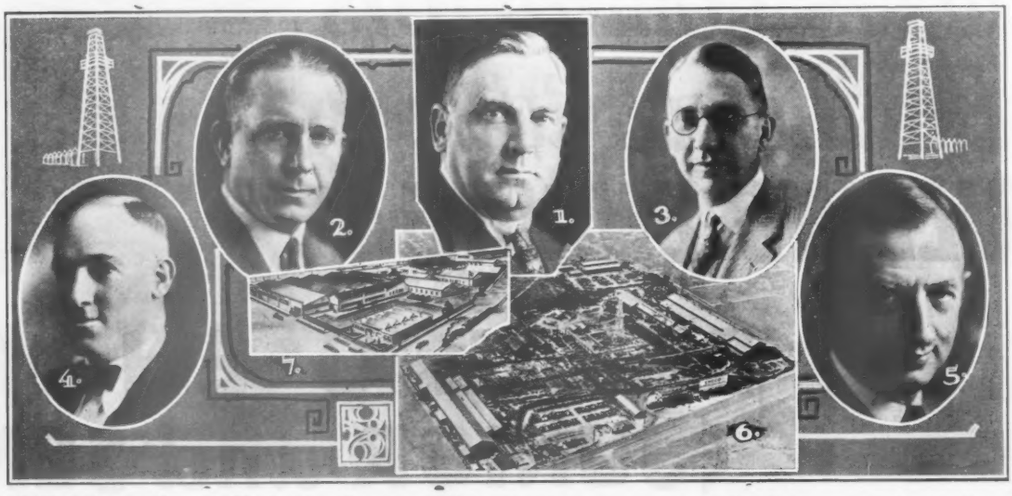
No change in the personnel of the D & B company will be made, at least in the immediate present, according to the announcement.

The original plant of the Emsco Steel Products Co., established in 1923, consisted of a machine shop, structural shop and forge shop on a tract of 20 acres in South Alameda Street, Los Angeles, making a limited line of all-steel derricks; bull, calf and band wheels; tug rims, tool joints, drill collars and well pulling hoists. In 1924 the Emsco Tool Co., an auxiliary concern, was formed to produce an additional line of drilling equipment, such as rotary machines, draw works, gas engines, reduction gears, countershafts and rotary chain.

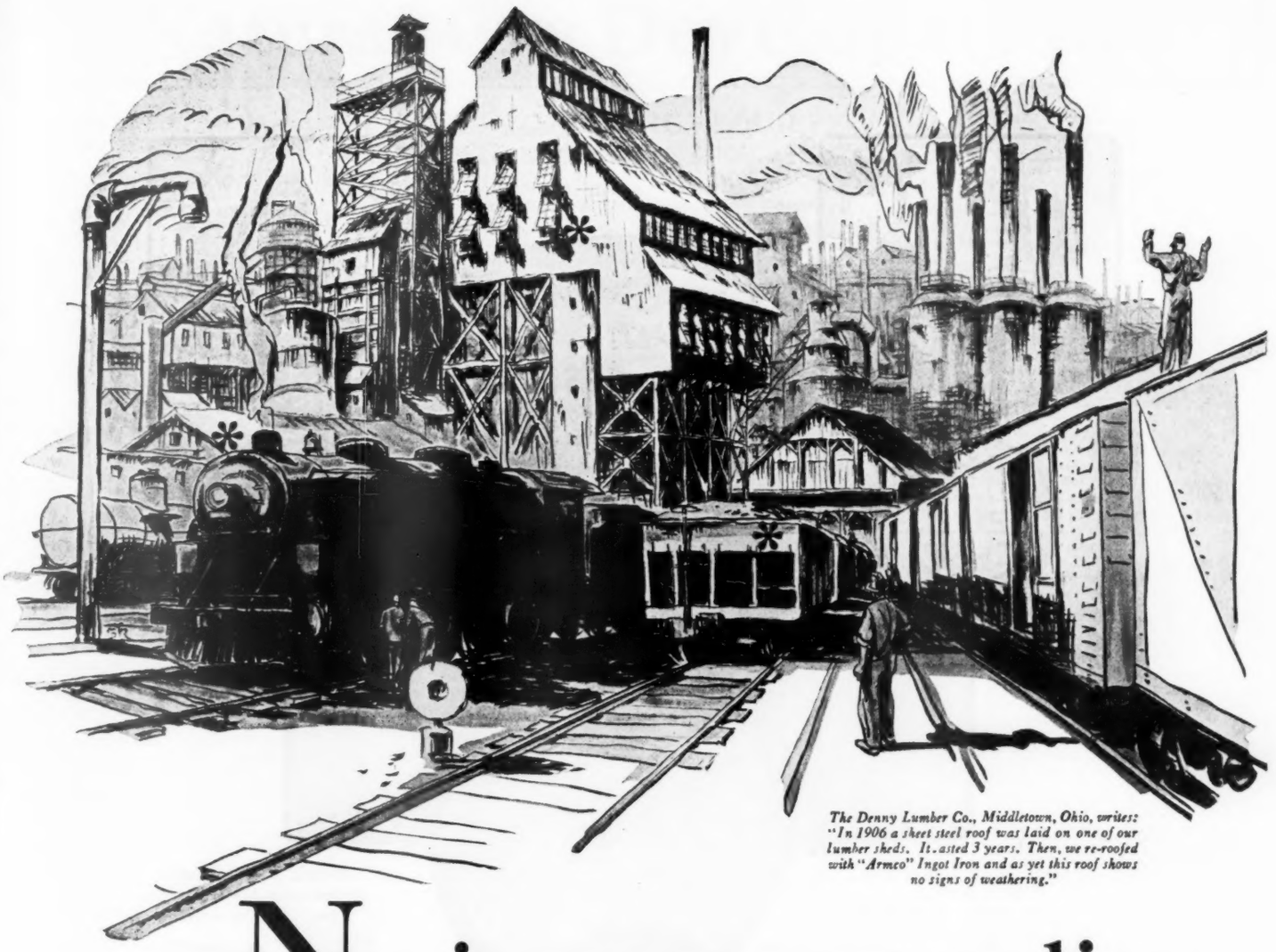
In 1926 the two concerns were merged, forming the Emsco Derrick & Equipment Co., a $3,000,000 organization.

The present D & B Pump & Supply Co. was incorporated in 1909, and the company has grown from a shop 28 by 46 feet to one of the largest and best equipped plants for the manufacture of oil field pumps, sucker rods and affiliated oil producing specialties.

OFFICERS OF THE EMSCO DERRICK & EQUIPMENT CO.



1—E. M. Smith, president. 2—W. A. Trout, first vice president and general manager. 3—E. W. Goeser, second vice president, in charge of engineering and production. 4—Charles D. Wagner, third vice president and director of sales. 5—J. S. A. Smith, secretary and treasurer. 6—Airplane view of Emsco Derrick & Equipment Co.'s Los Angeles, Calif., plant. 7—Plant of the D & B Pump & Supply Co., Los Angeles, Calif.



The Denny Lumber Co., Middletown, Ohio, writes: "In 1906 a sheet steel roof was laid on one of our lumber sheds. It lasted 3 years. Then, we re-roofed with "Armco" Ingot Iron and as yet this roof shows no signs of weathering."

No insurance policy covers *Rust-Fire**

ARMCO Ingot Iron

This triangle is your assurance that products bearing it are made with the skill, intelligence and fidelity associated with the name "ARMCO," and hence can be depended upon to possess in the highest degree the merits claimed for them.

YOUR tanks, pipe lines, roofing, siding and other sheet and plate equipment are constantly exposed to destruction on which insurance is never paid. Rust-Fire, this is, a fire that burns day and night, so slowly that it is seldom seen until it is too late to remedy the damage.

Would you protect your investment against this treacherous invader? Would you make sure of the long-lasting, low-cost service which your every dollar spent for sheet and plate equipment deserves? ARMCO Ingot Iron will assure you this worthwhile return. For it is "pure iron" and "pure iron" has many times demonstrated its ability to withstand the electrolytic action that fosters Rust-Fire.

Perhaps you would like to see the evidence that points to ARMCO Ingot Iron as the economical material for sheet, plate, and pipe installations. Your request will bring you complete information, together with the personal co-operation of our service engineers, if you so desire.

To Reduce Rust-Fire Costs Use ARMCO Ingot Iron for:

Roofing, Siding, Flow Pipe Lines, Welded Pipe Lines, Tank Cars, Well Casing, Condensor Pipe —or for any other sheet or plate requirements where low-cost-per-year-service is essential.

THE AMERICAN ROLLING MILL COMPANY

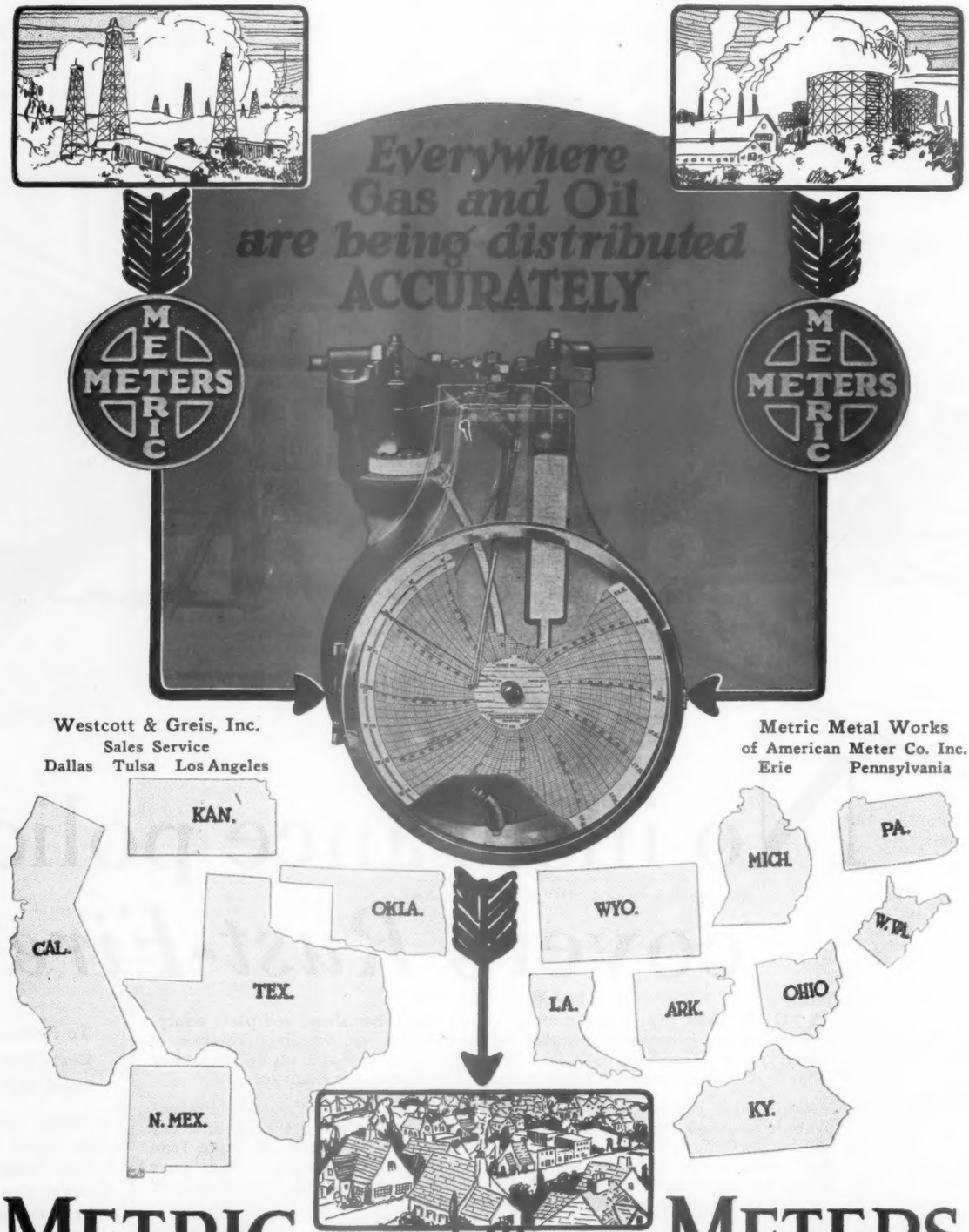
Executive Offices, Middletown, Ohio

Export: The ARMCO International Corp.
Cable Address: ARMCO, Middletown

ARMCO INGOT IRON
The Purest Iron Made

ARMCO Ingot Iron is now supplied also in extra-large plates, for large capacity tanks, tank cars, and other installations where durable, over-sized, heavy-gauge plates are needed. Purity, rust-resistance, uniformity, weldability, and other qualities peculiar to "pure iron" are embodied in these plates, as in the lighter plates and sheets.

*Rust . . . Fire . . . The only difference between rusting and burning is time—both are oxidation. You can see and feel the fire produced by rapid burning. But when metal rusts the process is too slow to be seen. Rust is the ash of this fire.



METRIC orifice METERS

Put SURE *in mea-*SURE*-ment*

Natural Gas Developments

BIG MARKET FOR NATURAL GAS COMPRESSED IN TUBES

More than $1,500,000,000 is invested in the production and distribution of natural gas, and the public is buying 1,188,539,000,000 cubic feet a year at a cost of $265,184,000. These figures are made public in a survey of the natural gas industry by Robert C. Taylor of a New York firm of investment bankers and specialists in natural gas securities.

Although the first natural gas company was organized in 1865, it was not until about 20 years ago that the industry reached a state of development warranting a degree of public confidence which has resulted in the present heavy investment.

"Consumption of 1926," the review points out, "is reported to have been more than double that for 1914. Of all the gas consumed in the United States in 1926, the best available reports indicate that 72 per cent was natural gas. Keeping pace with this increased consumption, there are now more than 41,000 wells in operation, serving more than 3,500,000 customers in about 2,000 communities. Despite the tremendous development that has taken place during the last 20 years, and especially during the last 10 or 12 years, less than 30 per cent of the population of the country are within reach of outlets of lines either for natural or artificial gas."

The review says the cost of furnishing pipe line service to outlying and widely separated suburban communities is prohibitive, but that for the past four years one of the largest industrial corporations in the country has been marketing compressed natural gas in tubes.

"The development of this phase of the natural gas industry which already has been in existence long enough to prove that it is practicable and productive of satisfied customers," the review continues, "is yet in its infancy and will provide an ever-increasing outlet for natural gas consumption."

GAS TRACT PURCHASED IN GRANT COUNTY, OKLA.

Gas rights on 1,400 acres in northeastern Grant County, Oklahoma, have been sold by Marland Oil Co. to the Northern Counties Gas Co. of Ponca City. The Marland company retains the oil rights.

The acreage lies north of the old Deer Creek Field and northward to the Webb Pool and school land production of the Marland company on the south. The acreage adjoins other acreage now held by the purchasing company, which it bought several months ago in securing the gas rights in the Deer Creek area. The gas company will spud in its first test on the new acreage on the C. H. Coffelt farm. The Northern Counties Gas Co. is associated with the Northern Utilities Co., both being subsidiaries of the Union Electric Co. of Pennsylvania.

WASHINGTON COUNTY HAVING A GAS BOOM

WASHINGTON, Pa., Nov. 12.—Interest in Washington County's latest gas boom was increased when the Pickerton and Haywood Co. of Monongahela, announced it had drilled in a 15,000,000-foot well on the C. D. Wolf property near Scenery Hill about 12 miles from here. The output has been sold to the Equitable Gas Co.

It was the third strike in two days. The day before two 3,000,000-foot strikes were announced by the South Hills Oil & Gas Co. of Pittsburgh, and the Manufacturers Light & Heat Co. The Pittsburgh firm's strike was on the R. F. Hill farm and the other on the V. L. Van Vorhin tract.

CALIFORNIA COMPANIES EQUIPPED WITH GAS GENERATING APPARATUS

By William W. Odell
Fuel Engineer, Bureau of Mines, Department of Commerce

Gas is produced in California by processes which are both unique and different from those common to other parts of the United States. The bulk of the manufactured gas is made in and distributed from two main districts which are centers of population—namely, the Los Angeles district and the San Francisco Bay district. The gas manufactured in the bay district is almost exclusively oil-gas, whereas that produced in the southern part of the state, where natural gas is available, is mostly mixed natural gas and reformed gas, but oil-gas is the chief product when the supply of natural gas is inadequate. Practically all of the gas companies are equipped with oil-gas generating apparatus, and anticipate using it in the future. As the continued use of the oil-gas process to the exclusion of all other processes, depends upon a continued supply of oil at a low cost, and the prospect of obtaining such low-priced oil in the future is somewhat uncertain, the questions have arisen: What will the future gas-making process or processes be? When will it be necessary to make plans for the installation of different gas generating equipment, and what will that equipment comprise?

Supply for Los Angeles

The Los Angeles district has available large quantities of natural gas, which it is believed will supply the requirements for domestic demands for years to come. When the supply of natural gas fails to meet the demand, the situation in this district will probably be much the same as that now existing in the northern district. In other words, the gas companies in the northern part of the state must solve now some of the problems that will not confront the gas industry in the Los Angeles district for a number of years. Large volumes of gas are sold in the latter district for industrial use at a low rate; it is probable that an appreciable part of this business will be lost as the pressure of domestic demand is felt and the price of gas for industrial use rises above the cost of fuel from other sources (coal.)

In the northern district the oil-gas process prevails because of the availability of cheap gas-oil, and the lack of a readily available supply of high-grade solid fuel at a satisfactorily low price. The prospect is that in the immediate future the high-grade fuels available by importation from neighboring states or other sources will be on a competitive basis with oil, and the future developments of the gas industry will be along different lines, solid fuel will be the basic raw material used.

As to the possibility of obtaining a future supply of low-priced oil from present sources and from oil shale, the indications are that oil will be used for gas making for a number of years to come, but it is evident that oil from oil shale cannot be supplied to northern California gas plants at a sufficiently low price to maintain the exclusive dominance of the oil-gas process, nor can we expect to long continue getting oil from present sources at such a low price.

Gas Making Processes

The applicability of the following gas-making processes to the needs of the industry have been considered: (a) Coal-gas, (b) carbureted water-gas, (c) oil-gas made by methods designed to give a maximum yield of by-products, accompanied by the development of the by-product markets to a high degree, and (d) combinations of (a) and (b), or of (a), (b) and (c). As a result of this study, the writer recommends that in general, the following plan be followed in developing the gas industry of California to meet the future conditions: Manufacturers combined oil-gas and carbureted water-gas, replacing the oil-gas equipment by coal-gas equipment as the price of oil advances, eventually making mixed coal-gas and water gas, carbureting the latter to such an extent only as will be justified and determined by the relative prices of oil and coal and by the marketability of the coke. The seasonal peak load could be cared for by making oil-gas, utilizing present oil-gas generating equipment. In this manner the oil-gas equipment need not be prematurely scrapped.

On account of the big fluctuations in daily demand for gas, both seasonal and otherwise, only a small percentage of the total gas made can be coal gas, since coal-gas generating equipment is not so "flexible" as either the oil-gas or carbureted water-gas generators in the production of gas having a high calorific

(Continued on Page 111)

CANADIAN ASSOCIATION IN ANNUAL CONVENTION

By Victor Lauriston

CHATHAM, Ontario, Nov. 12.—The ninth annual convention of the Natural Gas & Petroleum Association of Canada, held at Windsor, Ontario, was marked by the largest attendance in the history of the association, nearly 200 members being registered.

A short business session was presided over by President C. E. Steele. The financial report was presented by Secretary-Treasurer S. A. Morse.

For the board of directors, Maj. E. Sweet of Brantford reported an increasing measure of understanding, co-operation and mutual good will between the industry and the consuming public, the year being marked by a total absence of contention.

The afternoon session was devoted to papers and a questionnaire on various phases of the natural gas industry. The development of new business and the supplementing of natural gas with artificial gas to meet peak load demands and offset the decline in the producing fields were featured.

The two leading papers were "House Heating and Industrial Work," by William F. Jones, Jr., of the Dominion Natural Gas Co., Buffalo, N. Y., and "Mixing Natural and Manufactured Gas for Augmenting the Supply of Natural Gas Properties," by H. E. Merrill of the Republic Light, Heat & Power Co., Tonawanda, N. Y. T. A. Kennedy of the new business department of H. L. Doherty & Co. gave a short informal talk on the need of good salesmanship to meet the competition of other fuels.

The papers were followed by an interesting questionnaire, featured by short but practical papers on plugging off fluid in gas wells, use of casing, protection of pipe from corrosion, meter maintenance, regulator installations and methods of meeting the competition of other fuels.

Those who took part included C. H. Lutz, Dominion Natural Gas Co.; R. L. Bevan, Union Natural Gas Co.; P. S. Coate, Chatham Gas Co.; R. Fair, Dominion Natural Gas Co.; Wayne Kiser, drilling contractor; C. N. Glenny, Provincial Natural Gas Co.; John Pollard, Union Natural Gas Co.; C. Klopfer, Union Natural Gas Co. and Gordon D. Wickett of the Windsor Gas Co.

President Steele, in his presidential address, reviewed the difficulties encountered and overcome by the natural gas industry in Ontario and spoke with optimism of the future. He stated that when the association was organized in 1919 the only outlook was for a short life for the industry, owing to the rapid decline in the fields. The life of the industry had been materially prolonged by conservation measures in which the industry, the consuming public and the Provincial Government had all co-operated; and present measures looking toward the supplementing of the natural gas supply by manufactured gas insured a practically unlimited continuance of the service the gas companies were now rendering.

The following slate of officers, presented in behalf of the nominating committee by J. B. McNary of Hamilton, was unanimously adopted: President, C. E. Steele, Sterling Natural Gas Co., Port Colborne; first vice president, S. B. Severson, Dominion Natural Gas Co., Buffalo, N. Y.; second vice president, J. A. Richie, Dominion Natural Gas Co., Buffalo, N. Y.; Secretary-treasurer, S. A. Morse, Union Natural Gas Co., Chatham, Ontario. Directors: P. S. Coate, Chatham Gas Co., Chatham, Ontario; C. J. Yorath, Canadian Western Natural Gas Co., Calgary, Alta.; J. B. McNary, Hamilton, Ontario; E. P. Rowe, Toronto, Ontario; Gordon D. Wickett, Windsor Gas Co., Windsor, Ontario; Maj. E. Sweet, Brantford, Ontario.

Resolutions were passed expressing regret at the absence of D. A. Coste, dean of the natural gas industry in Ontario; of condolence to Mr. Schofield of the Brantford Gas Co. on the loss of his wife and daughter; and of condolence to the relatives of Perry A. Little, C. W. Featherstone and W. Williams, whose deaths occurred during the past year.

NORTH ARKANSAS AREA TO HAVE NEW GAS TEST

SHREVEPORT, La., Nov. 12.—North Arkansas gas territory in Franklin and Johnson Counties where Empire Gas & Fuel Corp. and its subsidiary, Public Utilities Corp. of Arkansas, are active and have some production, is to have another test by outside interests, permit being granted by the Arkansas Conservation Commission to Ozark Natural Gas Co. for No. 2 Culver in Section 14-8-27 Franklin County.

Columbia County also appears in the list with two wildcat wells to be drilled just north of the Louisiana state line. Von Hagen Syndicate has been granted permits to drill No. 1 Pickler in Section 19-19-22 and No. 1 Mason in 31-19-22, both being about 10 miles north of production in the Spring Hill gas district of Webster Parish.

DISPUTED FRANCHISE IS DECLARED LEGAL

SHREVEPORT, La., Nov. 12.—An opinion by the Union chancery court in El Dorado, Ark., holding illegal a franchise granted the Public Utilities Co. of Arkansas (Natural Gas & Fuel Corp. subsidiary) by the city council to supply gas to El Dorado consumers was reversed by the Arkansas supreme court in passing on the appeal. The lower court had held that a franchise granted J. W. Atkins and others in 1921 was exclusive. Atkins transferred the franchise to the Central States Gas & Electric Co. and the El Dorado Gas Co., controlled by the S. R. Morgan interests.

The El Dorado city council granted the Public Utilities Co. a competitive franchise last winter after the gas supply had failed and the El Dorado Gas Co. had been summoned into court accused of overcharging consumers. Installation of a new distributing system began last spring and the Public Utilities Co. is now supplying customers.

Deep Drillings Demand

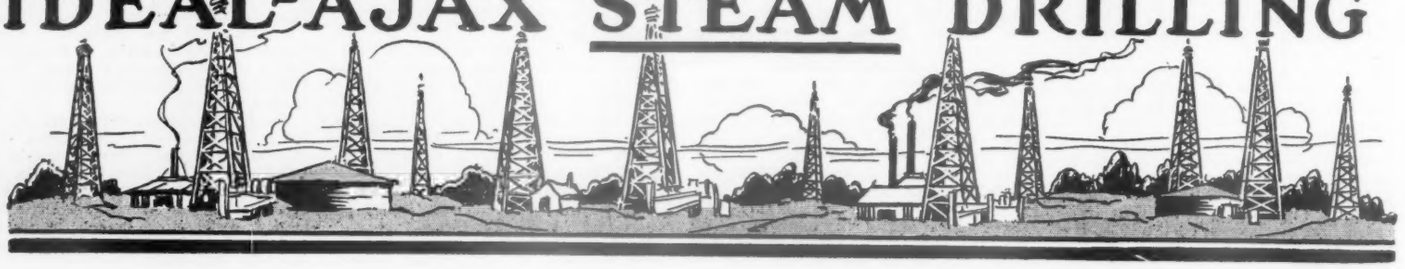
It takes brute strength to lift heavy tools from a mile-long hole.

It takes the pull of a locomotive to draw casing gripped viselike by thousands of feet of rock.

It takes power — great gobs of power, — immediately available — to meet the emergencies of drilling.

In oil drilling, *power — plus* is the secret of efficient performance.

IDEAL-AJAX STEAM DRILLING



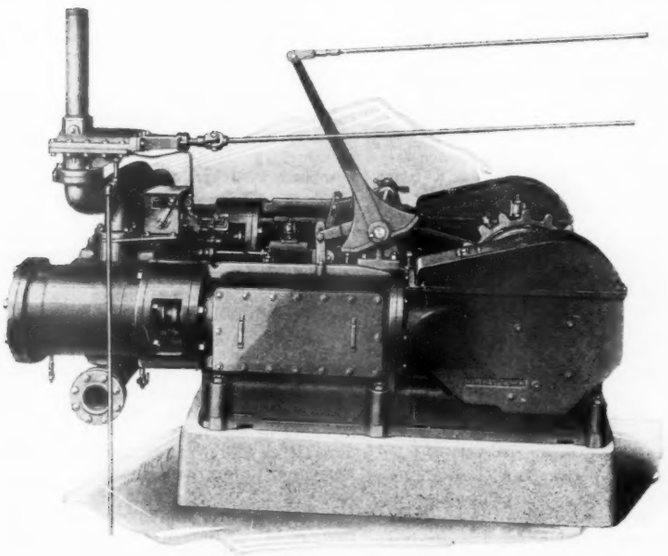
Power PLUS ~ ~

WHEN you buy a drilling engine, do you merely select a piece of machinery?

Or do you buy POWER?

A gas engine rated at 60 H.P. will deliver only sixty horse power under the most favorable conditions.

An Ideal-Ajax Steam Drilling Engine, 12x12 twin, will deliver *four hundred* horse power at two hundred pounds boiler pressure. This is what we mean when we speak of *power plus.*



Make certain that the engine you buy has ample power for your every drilling operation.

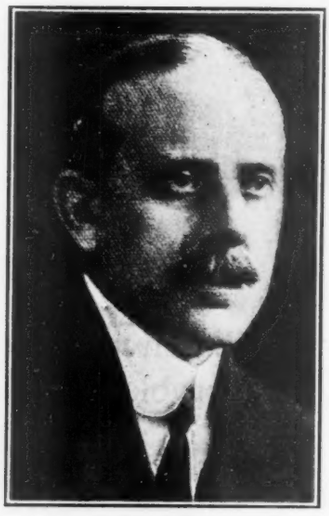
Made by
AJAX IRON WORKS
Corry, Pa.

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

In every oil field

ENGINES DELIVER POWER-PLUS

MEN KNOWN IN OILDOM



Maj. William Bowie

Maj. William Bowie, since 1909 chief of the Division of Geodesy, United States Coast and Geodetic Survey, and since 1919 president of the Section of Geodesy of the Internation Geodetic and Geophysical Union, is of particular interest to the oil industry in connection with the use of the gravity pendulum in the search for oil. This is one of the newer systems for the location of oil.

Major Bowie was born at Annapolis Junction, Md., May 6, 1872, educated at St. John's College (Annapolis, Md.), Trinity College (Hartford, Conn.) and Lehigh University (Bethelehem, Pa.). He was graduated from Lehigh in 1895 with degree of C. E. Honorary degrees: Trinity, M. A., 1907, and D. Sc., 1919; Lehigh, D. Sc., 1922.

Since 1895 he has been a member of the commissioned force of the United States Coast and Geodetic Survey. He has been in the field from 1895 to 1909, and in charge of work in various states of the Union, the Philippines, Porto Rico and Alaska. Since 1909, he has occupied the position of chief of the Division of Geodesy, United States Coast and Geodetic Survey. He has represented the Untied States at various international scientific meetings: International Geodetic Association, Hamburg, Germany, 1912; International Research Council, Brussels, Belgium, 1919; Pan Pacific Congress, Honolulu, Hawaii, 1920; International Geodetic and Geophysical Union, Rome, Italy, 1922; and Madrid, Spain, 1924.

During the World War he served as major, corps of engineers, during the period August, 1918 to February, 1919, on duty at War Department, Washington, D. C. He has been chairman of Board of Surveys and Maps of Federal Government, 1922 to 1924; president, 1919 to date of the Section of Geodesy of the International Geodetic and Geophysical Union. He has been both chairman and secretary of the American Geophysical Union, of the National Research Council.

Major Bowne is the author of a number of scientific reports of the United States Coast and Geodetic Survey and of numerous articles on isostasy in various scientific journals.

PERSONAL PARAGRAPHS

Stephen J. Cullinan, oil producer of Tulsa, Okla., is at home after a visit to Rochester, Minn.

* * *

F. H. Hillman, who retired some months ago as a director of the Standard Oil Company of California, has been ill at his home in San Francisco, Calif.

George H. Rawlings, who has been drilling in the Peruvian fields near Negritos, is in Petrolia, Ontario, on furlough.

* * *

Dave Black, oil operator of Pawhuska, Okla., paid a visit to Tulsa, Okla., and looked up a few of his former associates this week.

* * *

W. D. Richardson, of the Lake Petroleum Company, is on a trip to Kansas City, Mo., and the Chicago office of his concern.

* * *

A. B. Smith, president of the Pandem Oil Company, and Willis Storm, chief geologist, were Wichita Falls, Tex., visitors recently.

* * *

William G. Hanrahan, sales manager for the Gaso Pump & Burner Company, of Tulsa, Okla., is making a trip through the Texas fields.

* * *

Paul S. Ache, president of the Reiter-Foster Oil Company, is back in the main office at Tulsa, Okla., after a trip through the Texas fields.

* * *

J. E. Flanagan, head of The Texas Company's land department in Oklahoma and Kansas, made a trip through southern Oklahoma last week.

* * *

Wilkins Seacord and Mrs. Seacord are back in San Antonio, Tex., after a stay of several weeks in New York. Mr. Seacord is an operator in the Laredo Fields.

* * *

H. V. Matthews, formerly in the gas department of Midwest Refining Company, has become associate engineer for the United States Geological Survey at Midwest, Wyo.

* * *

Joseph B. Elam, secretary of the Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association, spent the week-end in Jena, LaSalle Parish, on legal business.

* * *

F. J. Omo, assistant to the president of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., is making an extended business trip to Philadelphia and other eastern points.

* * *

D. R. Brown, vice president of the O. C. S. Manufacturing Company, of Coffeyville, Kans., accompanied by Mrs. Brown, has returned from a five weeks' trip to California.

* * *

W. C. Coolidge, agent for the Atlantic Oil Producing Company in North Louisiana and Arkansas territory, spent some time recently at the company's Dallas, Tex., headquarters.

* * *

L. P. St. Clair, vice president of the Union Oil Company, has returned from a trip through the Mid-Continent area but left at once for San Francisco, Calif., on company business.

* * *

R. J. Metcalf, chief geologist for the Transcontinental Oil Company in the southwestern district with headquarters at Fort Worth, Tex., has left on a week's trip into New Mexico.

* * *

L. G. Stanley, district foreman for the Prairie Pipe Line Company in the Osage region of Oklahoma, was a visitor at the Independence, Kans., office of the company last week.

* * *

Mr. and Mrs. Allen Park are back to their home in San Antonio, Tex., after a trip to the Pennsylvania oil fields and especially the Bradford district where Mr. Park was born on an oil lease.

* * *

J. J. Conry, general superintendent of the Carter Oil Company, spent a few days last week in the Wichita, Kans., district, visiting his office there, and attending the company's quarterly meeting.

* * *

Romer Bullington, scout for the McMan Oil & Gas Company in the West Texas district, was married recently to Miss Vivian Murphy of Fort Worth, Tex. They returned to San Angelo last week.

* * *

H. S. Crowley, assistant superintendent of pipe lines for The Texas Company in Louisiana and Arkansas, and Mrs. Crowley, have returned to Shreveport, La., from a honeymoon spent in Dallas, Tex.

F. W. Burford, vice president and general manager of the Crystal Oil Refining Corporation, of Shreveport, La., spent several days in New Orleas, La., and other Gulf Coast cities on business recently.

* * *

William Sebastian, of Crawford & Sebastian, independent operators, of Shreveport, La., is attending to business again after a protracted siege of illness which kept him in the hospital for three months.

* * *

The many friends of C. R. McCollom, chief geologist of the Union Oil Company, will be glad to know that he has entirely recovered from a recent indisposition which, however, was of only a minor character.

* * *

William C. Schramm and Hal Kenney, of the Mound City Chemical Company, St. Louis, Mo., were in Tulsa, Okla., and other points in the Mid-Continent area during the past week on business of their firm.

* * *

R. O. Lowrence, assistant to C. U. Daniels in the land department of the Sinclair Oil & Gas Company at Fort Worth, Tex., is taking Ralph A. Johnston's place at Abilene while the latter is away on his honeymoon trip.

* * *

F. S. Seeley, superintendent for the Humble Oil & Refining Company in the Cotton Valley (Webster Parish, Louisiana,) and Irma (Nevada County, Arkansas,) districts, has been transferred to the McCamey district in West Texas.

* * *

E. W. Clark, vice president of the Union Oil Company and president of the American Petroleum Institute, has returned to Los Angeles, Calif., following a lengthy stay in the East in connection with matters pertaining to the Institute.

* * *

Edgar J. Marston, president of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., left the other day on a business trip to Montana. The Texas Pacific company owns the Homestake Exploration Company which operates in that State.

* * *

J. E. Bacon, formerly sales manager for the Pierce Petroleum Company in Arkansas and Louisiana territory, has been appointed manager of the Missouri-Kansas division of the Barnsdall Refining Company with headquarters at Kansas City, Mo.

* * *

John Bird, formerly with the Halliburton Oil Well Cementing Company and other enterprises identified with the oil industry in Shreveport, La., territory, has been made representative of the J. H. McEvoy Company, of Houston, Tex., in North Louisiana, South Arkansas and East Texas.

* * *

John H. Moran, well known in supply circles, has been appointed sales manager of the American Tank Company with headquarters at the home office in Oklahoma City. Mr. Moran was formerly sales manager of the International Supply Company and later with Oil Country Specialties Manufacturing Company, Coffeyville, Kans.

* * *

Fred C. Moore, well-known operator in the Glasgow Field of Barren County, Kentucky, spent a short visit in Toledo, Ohio. Mr. Moore's home is in Bowling Green, Ohio, but he is spending most of his time in Kentucky. With Mr. Scott he recently purchased the holdings of the Elem Oil & Gas Company, in Barren County.

* * *

Ralph A. Johnston, head of the land department in the Abilene, Tex., district for the Sinclair Oil & Gas Company, was married Saturday, November 5, to Miss Murrell May of Dallas, Tex. The groom is a graduate of the University of Oklahoma and the bride is a Texas University graduate. They left immediately after the ceremony for New Orleans and Havana.

* * *

Dr. Douglas B. Semmes, geologist, of Cisco, Tex., has joined the Alabama State Geological Survey. Doctor Semmes was professor of geology at the University of Alabama from 1919 to 1921 and with J. E. Brantley wrote Bulletin 22 of the State Geological Survey on "Petroleum Possibilities of Alabama," and is rejoining the staff in order to revise and bring up to date that bulletin according to information obtained by drilling and general geological field work in Alabama since that time.

The Longest String of 15½-in. Casing Ever Set in Wyoming

Wertz Dome.—No. 8 sec. 7-26-90; waiting for cement to set on string of 15½-in. casing at 2291 ft. This is the longest string of 15½-in. casing ever set in Wyoming.

(REPRINTED FROM INLAND OIL INDEX, ISSUE OF OCTOBER 14, 1927)

Run With the Butler Slip Ring Elevator

(PATENTS PENDING)

The fact set forth in the clipping reproduced above, from the *Inland Oil Index, Oct. 14,* is of more convincing importance than any comment on our part could possibly be—that when the *supreme test came,* a *Butler Slip Ring Elevator* was selected to handle it.

Further, we have the word of Mr. Floyd Hatfield, superintendent at Wertz Dome, that this immense weight was handled with maximum speed and satisfaction, and without mishap.

Great strength, the development of tremendous gripping power, and the attainment of high speed performance are chief among the distinguishing characteristics of the all-steel *Butler Elevator.*

Instead of lifting the casing by the top coupling, the *Butler* has movable slips which work within a heavy steel bowl, thus engaging the casing and carrying the entire load. All slips are extra long, of correct taper, interlocking and self-aligning. They engage the outside wall of any make of casing without danger of slipping or crushing, and are easily released.

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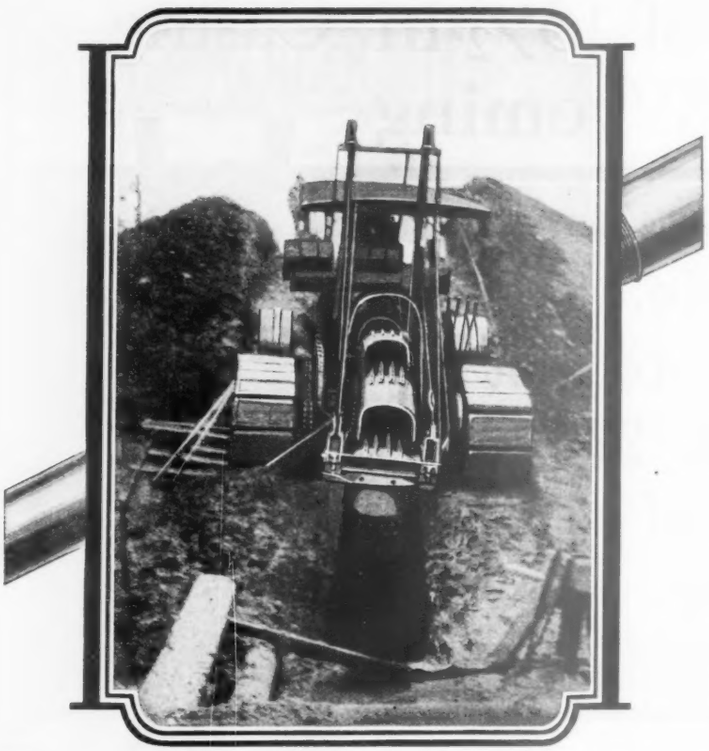

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ROCKY MOUNTAIN AREA

(Continued from Page 63)

97, which was completed late in July in the lower Embar at 3,163 feet as a 30,000,000-foot gas well, it being impracticable to carry it down to the Tensleep to test the big oil horizon found on the Oregon Basin structure by the Ohio Oil Co. The Ohio well, which was 240 feet higher, surface measurements, than the Utah Southern well, went through the Sundance, topped at 2,020 feet, and found what was described as a dead oil, but it is stated that the oil found in the Utah Southern well is a live oil. The structure is about 35 miles northeast of the Oregon Basin structure. The Producers & Refiners Corp. and the Kinney-Coastal Oil Co. are drilling a joint well on the Garland structure in their No. 3, Section 34-56-98, in which the 15½-inch casing was set at 950 feet and drilling is now in progress below 1,000 feet. It was expected that the Ohio would undertake an extensive drilling campaign on the Garland Dome, but the importance of the Oregon Basin structure appears to have caused the company to center its efforts in that district on the latter operation for the present. The Utah Southern well will be carried on down and an effort made to reach the Tensleep in which the indications are quite favorable.

One completion in Salt Creek was reported for the week, this being the Midwest Oil Co.'s No. 25, SW Section 35-40-79, which was completed in the first Wall Creek sand at 1,242 feet and made 234 bbls. initially.

LaBarge District

In the LaBarge district in southwestern Wyoming, several completions were reported. The California Petroleum Corp.'s No. 7-G, Section 34-27-113, was completed at 1,105 feet with an initial production of 70 bbls. The Wolf Oil Co. has three operations in Section 3-26-113, its No. 1 pumping 10 bbls. a day; No. 2, pumping 50 bbls., and No. 3 standing at 900 feet. Superior Oil Co.'s No. 3 pumped 75 bbls. initially. California Petroleum Corp.'s operations include the following: No. 3-G, Section 3-26-113, drilling at 680 feet, with 10-inch cemented at 645 feet; No. 5-1, Section 34-27-113, drilling at 905 feet, with the 10-inch cemented at 840 feet; No. 2-I, Section 3-26-113, running 6¼-inch at 1,069 feet; No. 5-J, Section 34-27-113, rig up; No. 7-E, Section 34-27-113, cemented 10-inch at 570 feet; No. 5-F, Section 34-27-113, drilling in shale at 440 feet, and No. 4-A, Section 34-27-113, underreaming the 10-inch at 450 feet. Seabeck Oil Co.'s No. 1, NE Section 35-27-113, is shut down at 1,025 feet. Wyoming Producers Oil Co.'s No. 1, SW Section 29-28-113, is drilling in lime at 1,600 feet. W. D. Newlon's No. 1, SW Section 12-26-113, is drilling at 1,424 feet. The California Co.'s No. 1, SW SE Section 11-29-115, in the South Piney district, set the 12½-inch casing at 935 feet. Total depth is 1,200 feet. A. H. Squire's No. 1, NE cor. SW Section 33-27-113, is bottomed at 1,300 feet and underreaming the 5⅞-inch casing. Texas Production Co.'s No. 1 Davis, NW Section 15-26-113, is drilling at 820 feet in sand showing some oil. Utah Oil Refining Co.'s No. 1 Bird, Section 21-27-113, is shut down and mudded at 2,003 feet, but has not yet been reported as an abandonment.

Oregon Basin

The Oregon Basin operation in Park County is showing renewed activity following the completion of the power lines. The Ohio Oil Co.'s No. 1 Batson, NE cor. NE Section 6-50-100, which has been rigged and ready to start for some time, has commenced spudding with a rotary drive, electrically equipped rig. Producers & Refiners Corp.'s No. 1 Frisby, Section 32-52-100, has commenced spudding, and same company has made a location for its No. 1 Owens in Section 29-52-100, on some acreage recently acquired from P. P. Anderson, a Wyoming newspaper man; Judge P. W. Metz and a syndicate of local people. Hodoo Oil Co.'s No. 1 Frisby, Section 31-51-100, is hauling in equipment. Altogether there are 14 operations under way, but none of these is expected to reach the objective sand until spring. Most of them probably will have considerable delay when they reach the gas sands in the upper horizons. In the meantime, everybody is hoping that some news will leak out as to the result of a test of the Ohio Oil Co.'s No. 3 Sonners, the well, which is estimated capable of making anywhere from 100 to 30,000 bbls. a day, though nobody believes the first estimate to be tenable, since the well is known to have filled a 250-bbl. tank in 13 minutes in a short test.

The Texas Production Co. has decided to go ahead with its Alkali Butte Dome test in Fremont County, instead of waiting until spring as planned a few weeks ago. The location for this well is 330 feet north of the south line and 430 feet east of the west line, SE NW Section 1-33-95. This structure has shown some oil in the Shannon sand at a shallow depth for a number of years. Several years ago a subsidiary of the Continental Oil Co. drilled a well one-fourth of a mile north of The Texas Company's new test and had a large flow of gas in the Wall Creek, followed by water. This structure has been known for many years and several attempts have been made to test it. The dips on one side are said to be almost perpendicular and drillers had trouble in keeping the hole straight. One of the Standard Oil group is said to have had it leased long before Wyoming became an important oil-producing state, but to have surrendered its holdings without making a test because oil from the Cushing Field made prices so low that it was not interested in opening a new pool far away from the markets. The new test will go to the Dakota, if possible, and possibly to the Sundance.

Poison Spider

The Fargo Western Oil Co.'s No. 30, SE Section 3-33-83, in the Poison Spider Field west of Casper, topped the Embar at 2,406 feet and is drilling at 2,560 feet with the intentions of stopping at 2,570 feet. The oil is slopping over the top and it looks good for 200 bbls. This is a black oil of asphaltic base. This company has about 40,000 bbls. in storage and its production has been around 700 bbls. a day from six wells. Recently it has been experimenting on them and succeeded in bringing the output up to around 1,000 bbls. A heating system so the oil can be run in winter weather is being installed.

In the Lost Soldier district, the Texas Production Co. is abandoning its No. 5 Good, in Section 3-26-90, at 2,930 feet, at which depth it had water in the Sundance.

New Mexico

The Texas Production Co.'s No. 1 Rhoades, SE NE NW Section 23-26-37, southeastern Lea County, New Mexico, has not drilled deeper since last report. From a total depth of 3,216 feet, it is making 23,000,000 feet of gas and approximately 20 bbls. of oil. Cement has been run between the 10 and 8¼-inch casing, and a separator now is being installed. There has been no change in the plans to complete the well as a gasser at the present depth. Same company's No. 1 Lockhart, SE SW Section 5-22-38, has not yet showed anything of great importance, though it is getting deep. At last reports it was drilling in blue lime at 4,180 feet. Cecil Bordages' No. 1 Jennie Hughes, Section 27-19-33, near Nadine, is making better progress after overcoming trouble from quicksand and caving ground, and is drilling at 300 feet. Midwest Refining Co.'s No. 1 State, NE Section 9-19-38, in the Hobbs district, has shut off caving ground with the 20-inch casing and is drilling in red shale at 320 feet. Maljamar Oil & Gas Co.'s No. 2 Beardsley, SE NE Section 15-17-32, was reported drilling in lime at 3,066 feet. A telegraphic message from Roswell states that at 3,250 feet, this well scratched a sand and commenced making 500,000 feet of gas, but this has not yet been confirmed. Inglefield & Bridges' No. 1 State, Section 4-17-34, is drilling in brown lime at 5,291 feet and swabbing 15 bbls. a day. These are the only active operations in Lea County.

In Eddy County, the Pueblo Oil Co.'s No. 1 Gessert, NW NE Section 1-17-31.

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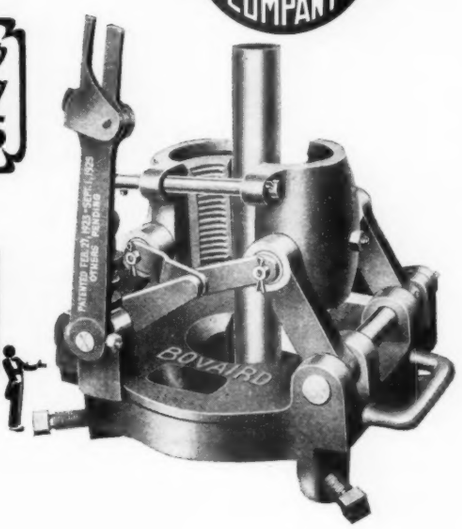

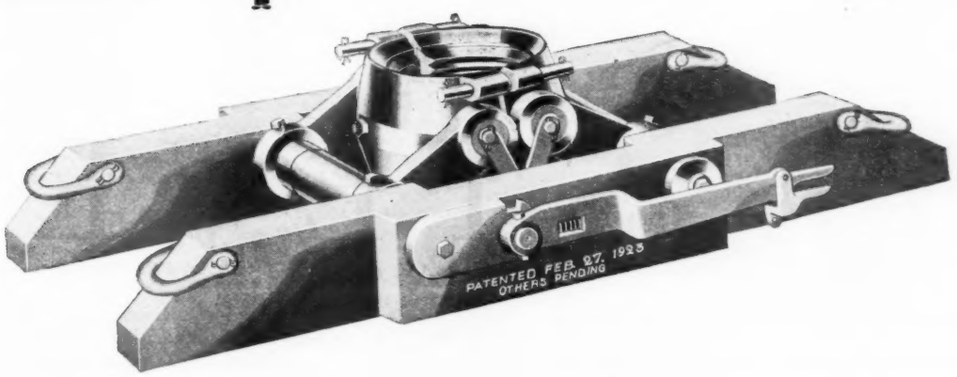

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943	5.00	7.50	26	9.00	9.00
278	6.00	9.00	67	10.00	15.00

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topped the lime at 3,570 feet and was drilling in gray lime at 3,620 feet. A later and unconfirmed report states that at 3,705 feet it encountered gas which blew the tools up the hole several hundred feet where they lodged and bridged the hole. A little oil was reported showing through the cave. The test was just about at the horizon where such results might be expected, judging from the log of the Texas Production Co.'s No. 1 Robinson on the same section which was completed at 3,885 feet as an 8,000,000-foot gas well and making 5 bbls. of oil with the gas. The Texas Production Co.'s No. 2 Robinson, NW SW Section 25-16-31, is drilling in lime at 3,260 feet. Last week it was reported in anhydrite at 3,100 feet. R. D. Compton's No. 4 Mann, SW NW Section 4-18-27, is underreaming 10-inch at 1,085 feet. Empire Gas & Fuel Co.'s No. 4-A Russell, SW SE Section 35-17-27, is drilling at 850 feet and had a show of oil at 412 feet. This is in a shallow pool where the company has several small producers. Ross & Grimm's No. 1 Daugherty, NW SE Section 3-17-27, in the same area as the Empire's shallow wells, is drilling in pink lime at 1,550 feet. George F. Getty, Inc.'s, No. 1 Hinkle, Section 23-30-29, is drilling in anhydrite at 1,190 feet, having reached the base of the salt at 1,010 feet. Levers & Carper's No. 5 State, NW Section 3-18-28, is drilling at 510 feet. Pueblo Oil Co.'s No. 2 Yates, SW SE Section 33-17-28, is drilling at 2,010 feet. Skelly Oil Co.'s No. 1 Beulah Lynch, Section 22-17-22, is pumping 15 bbls. a day on a test.

In Chaves County, the Texas Production Co.'s No. 1 Wilson, trustee, Section 29-17-18, on the Dunken Dome, is shut down at 4,895 feet with 1,200 feet of black brakish water in the hole from the horizon at the bottom. It will be abandoned. This well had 1,000,000 feet of gas at 2,900 feet, and 500,000 feet of hydrogen sulphite gas at 4,390.

The voters of Artesia, N. Mex., have granted a franchise to Van S. Welch of the firm of Flynn, Welch & Yates to supply that town with natural gas. The city council recently approved the application and ordered it submitted at a special election.

In Curry County, the Clovis Oil & Gas Co.'s No. 1 Hoskinson, NE Section 21-3-36, encountered a water sand at 3,665-70 feet and is running 6⅝-inch casing to 3,670 feet to make a formation shut-off. The quantity of water was about a half barrel per hour.

In Quay County, the Ohio Oil Co.'s No. 1, Section 24-7-39, Jordan Ridge, is drilling at 4,080 feet.

Northwestern New Mexico

In northwestern New Mexico, the principal interest just now centers in the Continental Oil Co.'s No. 17, Section 2-29-19, on the Santa Fe Co.'s Indian lease on the Rattlesnake Dome, which appears to have cleared up its numerous difficulties that have hindered progress for almost a year. This is a test to the Pennsylvanian on a structure that has been proven in the shallow Dakota series. No. 17 had a production of about 2,500 bbls. a day from two horizons in the Dakota which was cased off to make the deep test. If this test should prove that the extremely light oil found in the Dakota on the Hogback, Rattlesnake and Table Mesa structures in San Juan County, originates in lower beds, it would change the entire complexion of that district. Little information has been available as to what has been found below the Dakota, but it is understood that the test is now in the top of the Shinarump conglomerate at 3,727 feet and is making a show of oil and gas. The formation will be cored ahead of the drill to test it out. This horizon is several hundred feet above the Pennsylvanian, and even a good show will prove encouraging. A show for 25 bbls. or more was found in this same horizon in the Boundary Butte test in southeastern Utah. R. M. Smith's No. 1 Abrams, SW NW Section 23-29-11, is shut down at 532 feet. The Picture Cliff Oil Co.'s No. 1, NW NE Section 24-29-11, is drilling at 300 feet. T. C. N. Oil Co. has shut down drilling on its No. 2 Lanier, SE NW Section 9-29-11, while the crew is assisting in laying the pipe line from No. 1 Lanier to Aztec to supply that town with gas. No. 2 was down 470 feet at last reports. Portage Oil Co.'s No. 2 Hubbell, SW cor. Section 25-31-13, is drilling at 1,280 feet and carrying the 8¼-inch casing. Aztec Development Co.'s No. 1 Finch, SW SE Section 15-29-11, is drilling at 888 feet. It had a show of oil and gas at 880-8 feet.

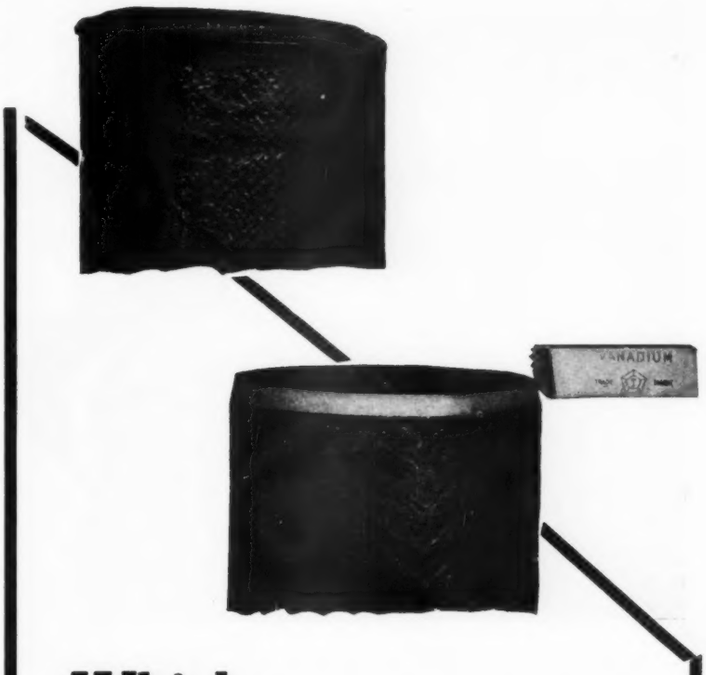
In McKinley County, S. Dysart and others' No. 1, SW cor. Section 21-14-9, is underreaming the 8¼-inch casing to bottom at 1,492 feet. The Hogback Oil Co.'s No. 1 Vogt, SE NW Section 12-16-10, Vogt structure, is drilling in the Mancos shale at 2,200 feet. The Jenkins Oil Co.'s No. 1, SE cor. NE Section 1-16-9, is shut down at 510 feet waiting for 10-inch casing. H. L. Williams' No. 2 Pettit, SW cor. SE Section 30-18-8, is shut down below 450 feet waiting on the 8¼-inch. The Ohio Oil Co. is abandoning its No. 1 Nightingale, NW NW Section 25-17-6, on the Chico Dome, at 1,800 feet, having found water in the Mesa Verde sand. Producers & Refiners Corp.'s No. 2, Section 12-17-9, Hospah Dome, is drilling at 850 feet.

In Valencia County, the Hub Oil Co. is spudding at 110 feet in its No. 1 Ball, SW NE Section 13-6-2, on the Rio Puerco Dome. It is located about one-fourth of a mile south of a test it drilled last year which was showing for a commercial producer at 2,900 feet when the driller is said to have drowned out the oil by drilling into a water sand beneath.

Colorado

The Northeastern Colorado Oil Co.'s No. 1 State, Section 36-8n-55, on the Willard structure, in Logan County, in northeastern Colorado, has reached a stage where results of some kind or other may be expected at almost any time. The well is strictly a wildcat with no other tests drilling anywhere near it, and the nearest producers being on the Wellington structure 90 miles to the west. It is located in the plains region generally referred to as the Denver Basin, where oil men generally are agreed there are structures, many of them covered by fresh water overlay that makes them difficult to work out, but disagreeing as to the depth at which prospective oil sands may be reached. The Willard well is expected to settle the question of depth as well as to whether closed structures in that area have suitable reservoirs for oil and ample source material to make them productive. The Willard well is now drilling at 5,214 feet and carrying the 4½-inch casing close behind the tools. After going through a stratum of bentonite, it entered a hard gray shale at 5,210 feet which has been accepted as the same formation that is found just above the Muddy sand of the Dakota series on the Wellington-Fort Collins structures. This shale is approximately 50 feet thick in the district 90 miles to the west. The well has not been troubled with much water, and has had several small gas shows. The best so far reported was at 3,250 feet beneath a stratum of lime which made sufficient gas through a column of 3,000 feet of water to make a flame 3 to 4 feet high. At another interval it went through a stratum of dead oil that had the consistency of axle grease. The test, if the correlations are correct, already has demonstrated that the Dakota beds are not as deep as many had been led to believe.

The Tidewater Associated Oil Co.'s No. 1 Amazon, SE SE Section 24-2n-103, on the Rangely Dome, in Rio Blanco County, has suspended operations for the winter at 4,800 feet, and may be abandoned in the spring. This is one of several tests drilling on the Rangely Dome, described as a perfect structure and second largest in size in the Rocky Mountain district. The structure has been producing oil for a number of years from sandy lenses in shale at around 600 feet. Two years ago the Midwest Refining Co. drilled a test on the SE SE Section 30-2n-102, which had around 50,000,000 feet of gas in the Dakota at 2,958 feet. The Texas Production Co. had an equally as large a well in the same horizon in the SW SW Section 30-2n-102, at 3,035 feet. Both companies had long and tedious jobs of



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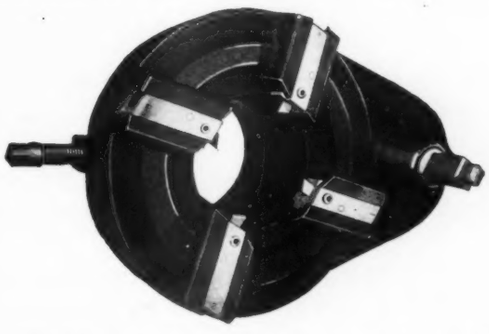

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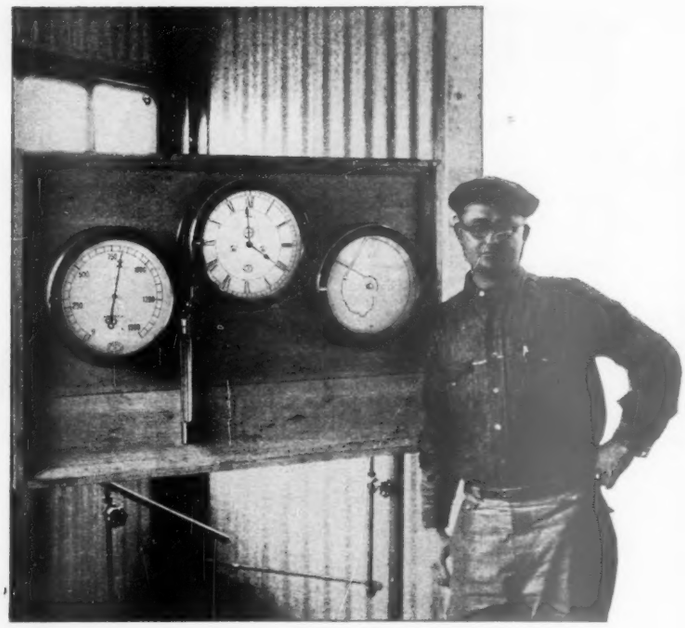

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getting these wells under control and completing them as gassers, it being found impracticable to test the lower horizons in either of them. The Tidewater Associated then started its No. 1 Amazon with a rotary drill and the Midwest and Texas companies started other tests, the Midwest's being near its gasser and the Texas Production Co. moving out to the NW NW Section 31-2-102. No. 1 Amazon was 80 feet in the Dakota at 3,475 feet, and found neither oil, gas nor water. It found water in a second sand in that formation and at 3,717-57 feet, had a saturated sand in the Morrison, but a test showed it not to be commercial. It was drilled to 4,770 feet after finding water in the Sundance. The plans were to carry it on down as a test to the Pennsylvania, but broken drill stems and other difficulties have left the hole in rather bad condition. The equipment will be left in the field until spring and it is probable that the three companies will agree to put down a joint test to the Pennsylvanian, using the Tidewater Associated's rotary equipment. The Midwest's No. 2 Rangely is still trying to get through the gas sand in the Dakota and is bottomed at 3,052 feet with the gas under control. The Texas Production Co.'s No. 2 Emerald is believed to be in the top of the Sundance and will be drilled in as soon as hole is in condition. It is bottomed at 3,815 feet waiting for cement to set to shut off a cave.

Moffat County

In Moffat County there were no new developments of a sensational nature during the week. Two wells producing from the Morrison sand are giving some very interesting results. The Texas Production Co.'s No. 5 Parkinson, NW NW Section 23-4n-92, on the Iles Dome, which stopped in the Morrison sand without testing the Sundance, has been on production for more than a month from sand at 3,314-25 feet. It made 648 bbls. in the first 24 hours and then dropped down to 477 bbls. However, it began to climb back again and this week made as high as 610 bbls. a day, flowing by heads. It was beaned down to a 1-inch choke after which it made 510 bbls. in 24 hours. The other Morrison sand well showing a sustained production is the Texas Production Co.'s No. 10 Knowlton, Section 33-5-91, on the Moffat Dome. It is being drilled down to the Sundance and is bottomed in the top of that horizon at 4,415 feet, where the 4¾-inch casing is being set before drilling in. It was making oil steadily from the Morrison from between casings, gauging 178 bbls. in the first 24-hour test. It then declined to around 100 bbls., but now is climbing back and yesterday gauged 200 bbls., or more than when originally tested. It has averaged 150 bbls. a day since early in September. The other producing well is the Midwest Refining Co.'s No. 18-SD Parkinson, producing from the Morrison sand at 3,342-62 feet. It has been completed for the present at 3,362 feet, but may be drilled deeper at a later date. In the first week it produced an average of 306.4 bbls., or a total of 2,145 bbls.

The Midwest Refining Co.'s No. 34-SD Parkinson, which had some gas in the top of the Morrison at 3,053 feet, has not yet been drilled any deeper. The gas was mudded off and the 8¼-inch has been run to bottom and cemented. Same company's No. 4-SD Shaw, NW NE Section 27-4-92, is still at 3,195 feet, total depth, and underreaming at 3,140 feet. Same company's No. 8-SD Parkinson, NW NW Section 23-4-92, is rigging up. Texas Production Co.'s No. 17 Parkinson, NW SW Section 23-4-92, which entered the top of the Sundance horizon at 3,485 feet, has resumed drilling in black shale after running the 4½-inch. It is due to enter the sand at any time. It was showing considerable gas and some oil when the casing was run. Same company's No. 6 Parkinson, NW NW NW Section 23-4-92, has commenced spudding and is running the 15½-inch casing at 120 feet. Same company's No. 12 Parkinson, NE SW Section 22-4-92, is building rig.

Shaffer Oil & Refining Co.'s No. 205 Yarg, NW NW Section 26-4-92, is rigging up, and L. L. Keith's No. 1 Milliken, SW cor. Section 14-4-92, is building rig. Reiter-Foster Oil Co.'s No. 1 State, SE SE Section 16-12n-100, Hiawatha Dome, is drilling at 1,895 feet. The first sand is expected at a little below 1,950 feet and at that depth the casing will be run and set. If this sand shows gas as it did in the discovery well drilled by the Morris interests, it will be carried on down, but the operators are hopeful of being low enough to encounter oil. The Ohio Oil Co.'s No. 1 Kuykendall, NE SE Section 22-12-100, the same section as the big gas well, is drilling below 1,735 feet.

In Other Counties

The Routt County operations reveal nothing out of the routine, while in Jackson County, the only development of special interest is the starting of a new test by the North Park Oil Co. in its No. 1 Goettler, NE NE SE Section 9-6n-82, on the Crosby Draw structure. It commenced spudding November 1 with a small rig and is drilling at 200 feet after shutting off surface water at 60 feet. This location is 18 miles southwest of the Continental Oil Co.'s freak well near Walden and just east of the Routt County line. It started in the base of the Niobrara shale and is expected to reach the Dakota at 700 to 800 feet.

Considerable leasing in the Middle Park, in Grand County, has been reported for some time with the Continental Oil Co. and the Texas Production Co. being the principal companies mentioned. Grand County is immediately south of Jackson County and Middle Park is one of the three high plateaus surrounded by mountains which run in a north and south direction in the central part of the state, the Continental's operation at Walden being in the North Park. The leases reported being signed up are on acreage in the Muddy Creek district north of Kremmling, and it is said that some of these call for drilling to start this year.

The Detroit Oil Association's No. 1 Olbert, Section 9-35-12, in the Thompson Park district, in LaPlata County, is reported to have had a show for 6 bbls. at 1,057 feet. This is the second show reported in this well which starts in the Mancos shale and is expected to reach the Dakota at around 1,500 feet. A test started some time ago by the Taylor Syndicate in its No. 1, Section 17-33-7, on a Ute Indian lease near Ignacio, in LaPlate County, has been abandoned. It merely spudded in and was then shut down. The rig has since been moved away.

The Continental Oil Co.'s No. 1 Abbey, Section 27-18-70, in the west extension of the Florence Pool in Fremont County, was deepened from 1,650 feet to 1,750 feet where mineral water was encountered in the Dakota. It is being plugged and abandoned.

Montana

The Kalispell Oil Co.'s well on the Bannatyne Dome, Section 17-25-1, is a dry hole at 1,443 feet. It had a small showing of gas and some oil, but nothing of commercial size. This location is down on the flank of the structure and about 125 feet lower structurally than the Arnold discovery well.

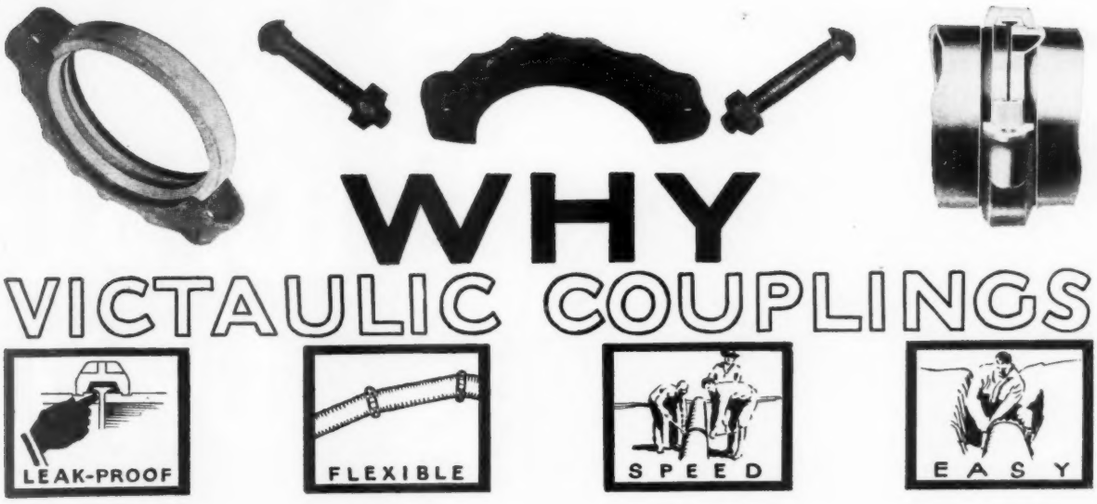
At Miles City a carnival and dance and a holiday of one day celebrated the delivery of the first natural gas through the new 76-mile pipe line from the Glendive gas field in eastern Montana. The Hope Engineering Co. laid the line and is now delivering gas to Miles City.

The third annual convention of the oil and gas operators of Montana will be held at Great Falls December 9 and 10. The city is starting preparations for a warm welcome to the visiting oil men, and the Montana chapter of the Rocky Mountain Oil & Gas Association will conduct the convention.

The Hope Engineering Co. has completed 25 miles of the pipe line from the Sunburst Field to Great Falls that will supply natural gas to Great Falls; about 75 miles of line still remain to be laid. The manufactured gas distribution system is now being overhauled in Great Falls to carry the natural product to consumers.

Drilling Plans

In spite of the dusters recently brought in in the new Bannatyne development.



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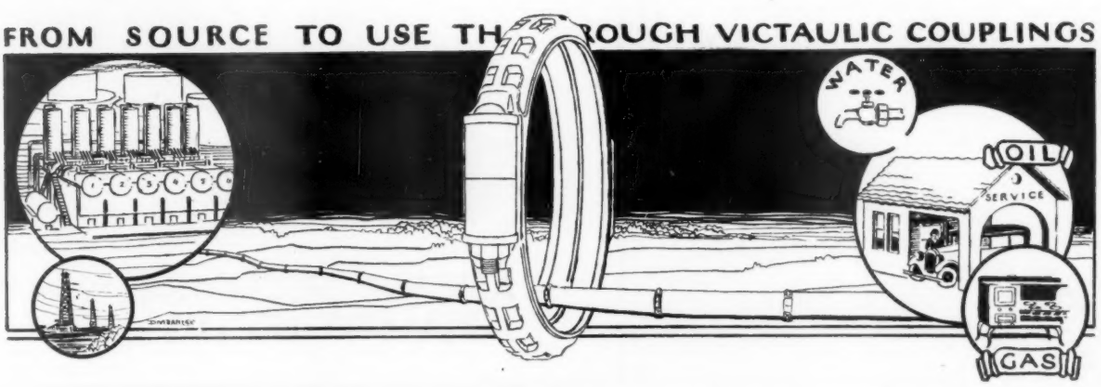

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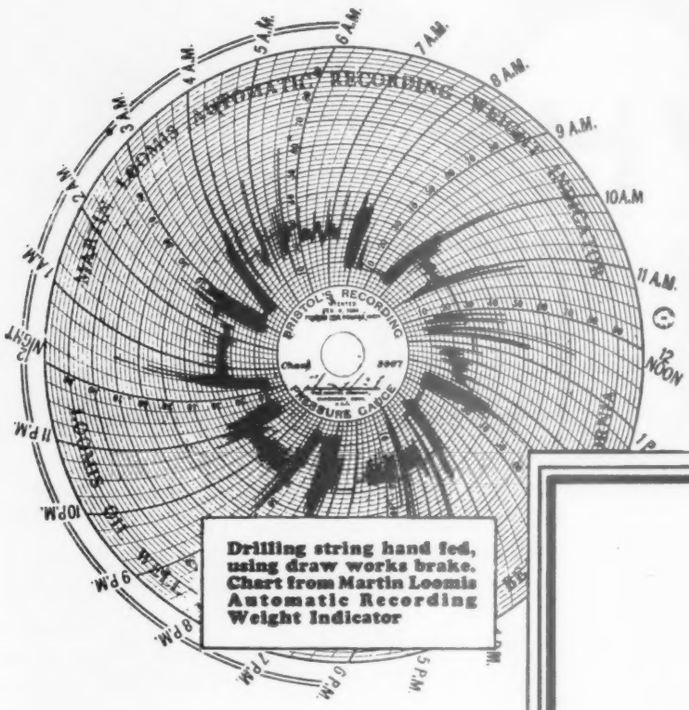

Drilling string hand fed, using draw works brake. Chart from Martin Loomis Automatic Recording Weight Indicator

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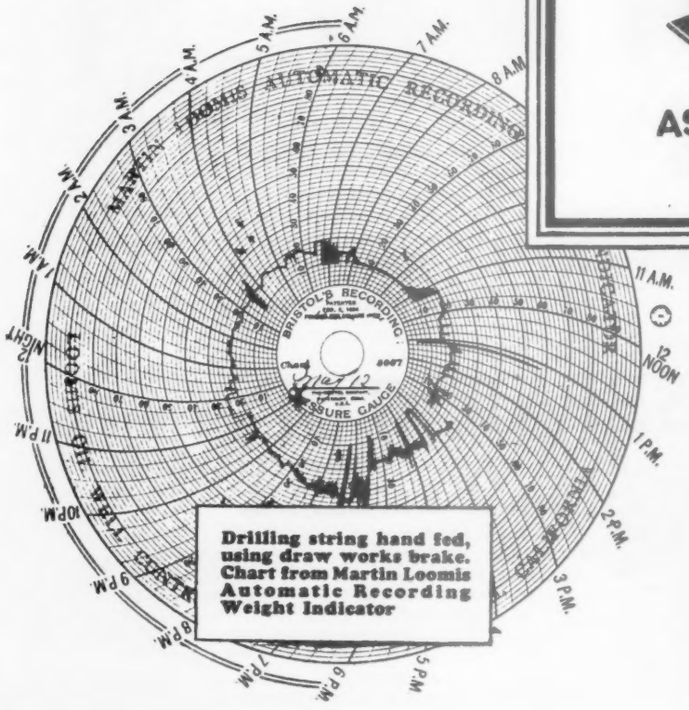

Drilling string hand fed, using draw works brake. Chart from Martin Loomis Automatic Recording Weight Indicator

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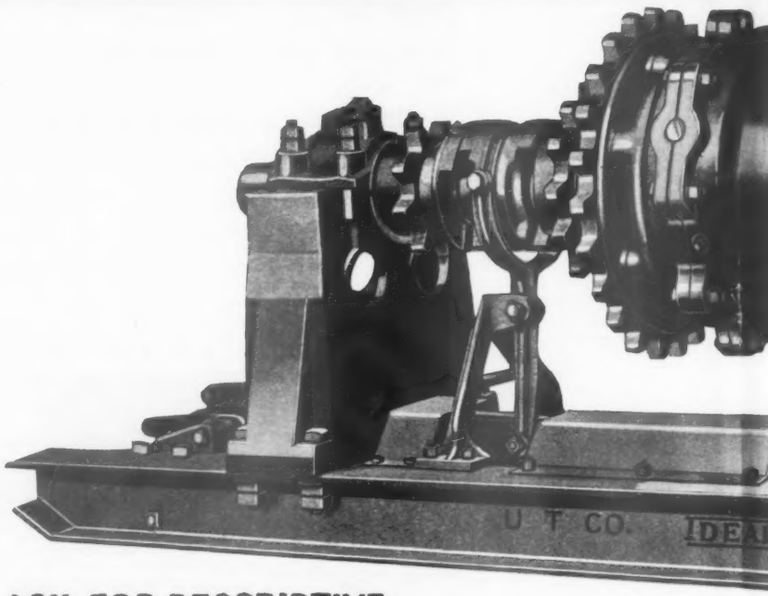

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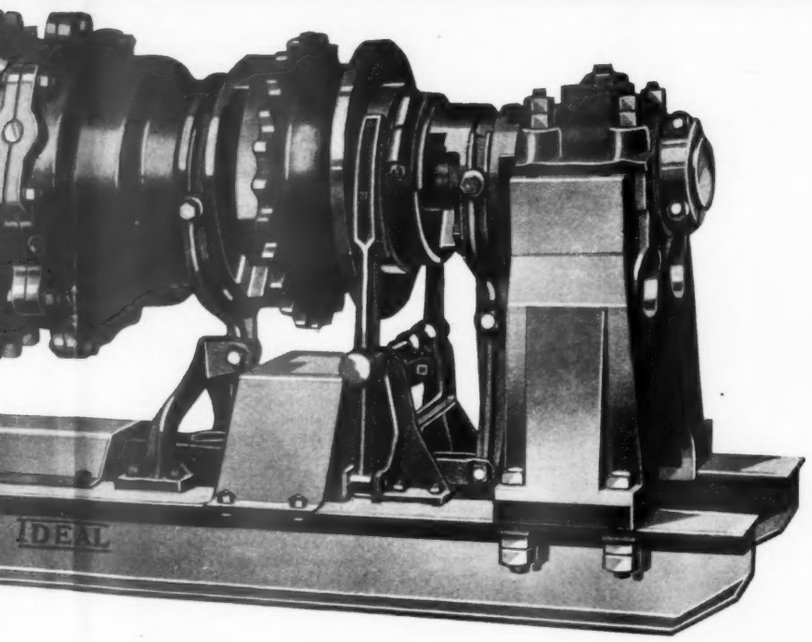

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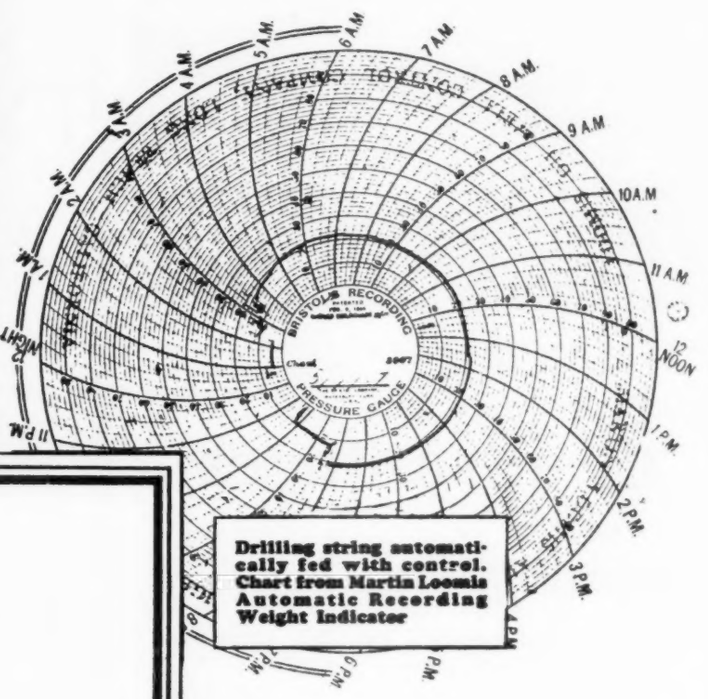
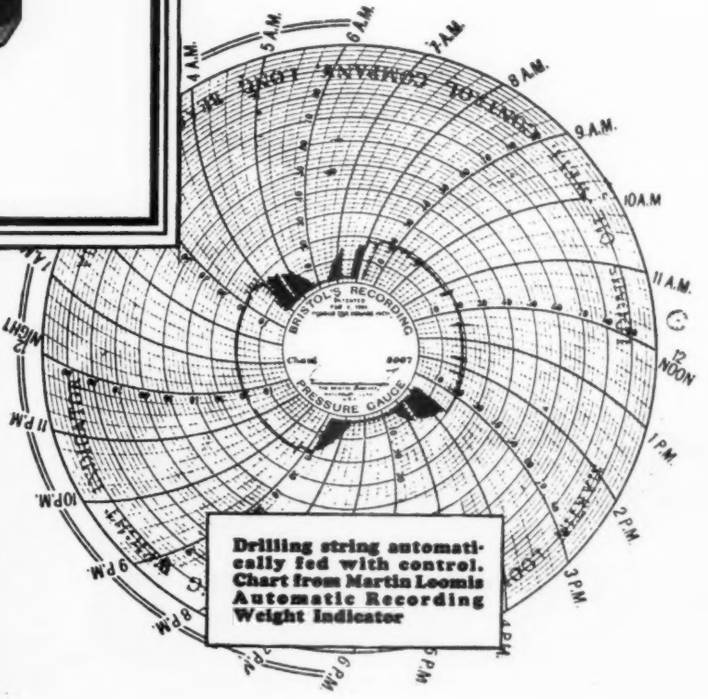
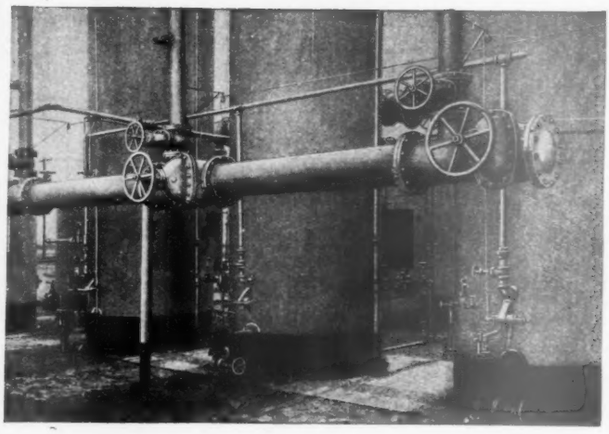


Drilling string automatically fed with control. Chart from Martin Loomis Automatic Recording Weight Indicator

SAME WELL
SAME CONDITIONS



Drilling string automatically fed with control. Chart from Martin Loomis Automatic Recording Weight Indicator



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three more wells are scheduled for that area in the near future. S. C. Ferdig has announced that he will drill two wells, and the Texas Pacific Coal & Oil will drill a well there this winter. Another drilling campaign is scheduled for Pondera County by the Continental Development Co., which plans to drill 30 wells on the Hirschberg tract near Pendroy.

The city of Kalispell, Mont., having about 27 miles of dirt streets, has contracted for crude oil to sprinkle the streets. Owing to the low price of oil and the high cost of obtaining water for the city, this oil is costing less than good water. The city authorities consider that using the oil for sprinkling the streets will make the cost to the city less than if water were used next summer.

The new Dakota Montana Oil Co.'s well on Section 7-34-1 in the Sunburst Field is making 1,500 bbls. daily, and the National Oil & Gas Co.'s well on the same section is testing a showing of oil at 1,400 feet that looks commercial.

On Section 19-35-1, the P. M. K. Oil Co. has a producer good for 25 bbls. at 1,525 feet from the Ellis contact, and the Fifty-Six Petroleum Co. drilled in a producer good for 30 bbls. on Section 32-35-1. The General Oil Co. on Section 8-34-1 has a gasser in the Sunburst sand at 1,175 feet.

The Ohio Oil Co.'s wildcat drilling on the Dry Creek Dome in southern Montana is at 2,300 feet, with the objective sand about 3,400 feet.

The Ohio Oil Co. has been drilling with a diamond drill on a hidden structure near Harlem, Blaine County, north central Montana. This part of the country is covered with glacial deposits and the geology cannot be defined from the surface. However, the Ohio company has obtained enough information of the subsurface geology to warrant the company moving in a string of heavy tools and drilling a deep well.

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Wyoming	
Salt Creek	33,320
Teapot	1,110
Big Muddy	2,830
Grass Creek	2,560
Elk Basin	1,040
Greybull	20
Dutton Creek	20
Notches	170
Rock River	2,570
Rex Lake	130
Lance Creek	1,240
LaBarge	510
Mule Creek	660
Poison Spider	490
Hamilton	610
Osage	310
Lander	960
Pilot Butte	270
Ferris	40
Byron	90
Lost Soldier	2,570
Simpson Ridge	70
Total Wyoming	51,590
Montana	
Cat Creek	1,940
Lake Basin	230
Kevin-Sunburst	11,500
Total Montana	13,670
Colorado	
Florence	927
Moffat	1,252
Fort Collins	2,821
Walden	.....
Iles Dome	770
Rangely	100
Tow Creek	545
Boulder	25
Total Colorado	6,440
New Mexico	
Rattlesnake	475
Hogback	290
Cap Rock	101
Table Mesa	.....
Artesia	1,267
Total New Mexico	2,133
Total Rocky Mountain	73,833

SPECIAL FROM CALIFORNIA

LOS ANGELES, Calif., Nov. 12.—The Chamber of Mines and Oil will sponsor a special train to the American Petroleum Institute convention at Chicago. Convention headquarters will be at the Stevens Hotel. The special train will leave Los Angeles over the Santa Fe Railway at 5:30 p. m. on Friday, December 2, and arrive at Chicago at 10:30 a.m. Monday, December 5. The board of directors of the chamber has requested the "wildcats" to take charge of arrangements in connection with this trip and this committee is bending every effort towards making the trip an enjoyable one. It is expected that the party will be made up of over 100 prominent California oil men.

NORTH LA.-ARK.

(Continued from Page 59)

Oil Co.'s No. 1 Thompson, Section 32-23-16, a wildcat in the NW cor. of the parish, is drilling at 2,100 feet. Simplex Oil Co. has cemented 6-inch at 2,204 feet in No. 4 Thomas, Section 15-20-15. Standard Oil Co. began drilling No. 54 Helpman, Section 16-21-16, November 2, and cored sandy shale at 1,822 feet. Standish Oil Co. drilled 6-inch plug at 1,039 feet in No. 1 Jolly, Section 22-22-15, and is waiting on standard rig. Tubbs and others put a new rig on No. 1 Ben Hines, Section 9-14-16, and now have a fishing job for drill stem twisted off at 1,880 feet. Woodley Petroleum Co. cemented 6-inch at 1,923 feet in No. 4-B Knight, Section 2-15-12, and Woodley & Collins are drilling No. 1 McVey, Section 23-19-14, at 1,640 feet.

DeSoto Parish

Pleasant Hill—Magnolia Petroleum Co. is drilling shale at 3,258 feet in No. 1 Logan, Section 17-10-12, deepening after flowing 25 bbls. for a while at 3,173 feet. Wingfield and others have shut down No. 1 Haywood, Section 18-10-12, at 2,400 feet.

Miscellaneous — American Controlled Oil Co. swabbed No. 1 Lanier, Section 7-11-11, at the rate of 400 bbls. per day with sand from 2,718-35 feet and is shut down waiting on standard rig. Benson Oil Co. began drilling No. 1 Woolf, Section 3-10-13, October 30, set 12½-inch at 102 feet, topped the Nacatoch at 1,310 feet and is drilling at 1,330 feet. Dixie Oil Co. is still in the lime at 5,725 feet in No. 1 Jenkins, Section 9-12-11. Foster and others are rigging up No. 1 Johnson, Section 7-10-13.

LaSalle Parish

Urania—Pima Oil Co. cemented 6-inch at 1,530 feet in No. 10 Urania, Section 7-10-2e. Zoder and others also have 6-inch cemented at 1,509 feet in No. 6 Urania, Section 7-10-2e.

Monroe Gas District

Morehouse Parish—Natural Gas Products Co.'s No. 10 Tensas Delta, Section 27-22-4e, began drilling October 28, set 12-inch at 171 feet and is drilling at 918 feet. The Texas Company's No. 1 Silvey, Section 22-20-6e, is drilling at 3,780 feet.

Ouachita Parish—Hatcher & Evans drilled out 6-inch plug at 2,086 feet and are drilling No. 6 Hatcher, Section 16-19-4e, at 2,169 feet. Imperial Oil & Gas Products Co. cemented 6-inch at 2,105 feet in No. 2 Stubbs, Section 13-19-3e. Industrial Gas Co.'s No. 1 McGee, Section 3-18-4e, is in a rock at 1,785 feet. Jordan Drilling Co. began drilling No. 1 Miller, Section 18-18-5e, November 2, set 12-inch at 165 feet and 8-inch at 929 feet. Ladell Properties' No. 45 fee, Section 20-20-5e, is drilling at 2,100 feet. Ouachita Natural Gas Co. is in shale at 2,067 feet and No. 2-A D'Arbonne, Section 34-19-3e. Southern Carbon Co. set 12½-inch at 210 feet in No. 8 Fairbanks, Section 38-19-4e, and is drilling at 750 feet. West Virginia Oil & Gas Co. has derrick pattern on location for No. 5 fee in the C NW NE, Section 5-18-4e.

Union Parish—Carter & Goodwin, drilling No. 1 Security, Section 7-23-1e, cored 2 feet of sand 2,250-52 feet that showed oil and then developed water in the next 5 feet, total depth 2,257 feet. Interstate Natural Gas Co.'s No. 1 Steele, Section 36-20-3e, is drilling at 1,980 feet.

Richland Parish

W. C. Feazel's No. 1 Hemler, Section 20-16-6e, is drilling at 1,138 feet and No. 2 Hemler, Section 6-15-6e, began drilling November 8 and is down around 100 feet. Gulf Refining Co. is moving in a heavy rig for a deep test in Section 8-17-6e; No. 1 Millsaps, 100 feet south and east of NW cor. NE; No. 3 Rhymes is a location 1,270 feet north and 1,370 feet east of SW cor., Section 28-17-6e; No. 2 Wayne Lumber & Timber Co., Section 23-16-5e, is in a rock at 2,150 feet.

Moody & Seagraves have location for No. 1 Hatch, 1,983 feet east and 1,330 feet south of C, Section 24-16-5e; No. 1 McClanahan, Section 36-16-5e, is drilling at 1,900 feet; No. 2 McCoy, Section 30-16-6e, is down 1,900 feet; No. 1 C. M. Noble, Section 36-16-5e, is rigging up

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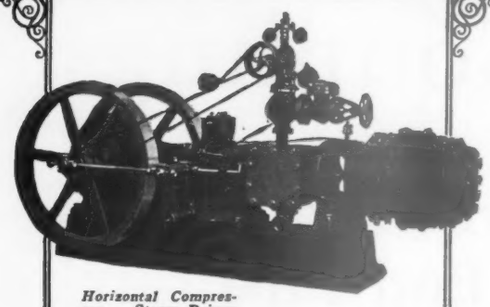
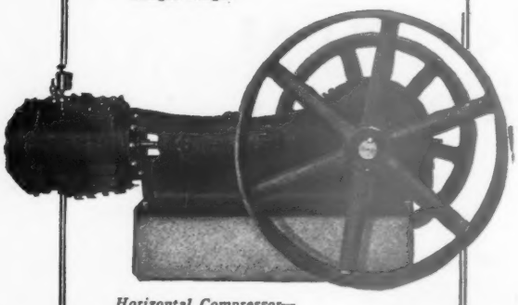


Horizontal Compressor — Steam Driven Single Stage.



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ROCK WAUGH DRILLS

and No. 1 W. T. Osborn, 660 feet south and east of NW cor. NE, Section 14-15-5e, is a derrick.

Natural Gas & Fuel Corp.'s 2-B Sartor, Section 19-16-6e, is drilling at 580 feet with 20-inch casing set at 200 feet; No. B-3 Sartor, Section 30-16-6e, is still a location as is No. 4-B Sartor, 660 feet south and 1,320 feet east of NW cor. SW, Section 18-16-6e. No. 1-A Sartor, Section 9-16-6, did not set 15½-inch at 186 feet as previously reported but has cemented 20-inch at 200 feet. No. 1-A Thompson is another new location, 1,320 feet south and 940 feet west of the NE cor., Section 21-16-6e.

Roxana Petroleum Corp. cemented 8¼-inch at 926 feet in No. 2 Tensas Delta Land Co., Section 1-14-5e. Southern Carbon Co. has derrick up for No. 1 Sartor, Section 20-18-8e. Standard Drilling Co.'s No. 1 Delta Hardwood Co., Section 22-16-7e, is drilling at 2,245 feet and Stovall Drilling Co. has rig up for No. 1 Dunning, corrected location for which is 660 feet south and east of the NW cor., Section 26-16-6e. Woodley Petroleum Co., and Triangle Drilling Co. are down 2,475 feet on No. 1 Hemler, Section 31-18-7e.

Sabine Parish

Pleasant Hill—Arkansas Fuel Oil Co. began drilling No. 1 Logan, Section 33-10-12, November 2, set 10-inch at 200 feet and drilling at 1,870 feet; No. 1-A Logan, Section 32-10-12, had a leaky casing at 1,700 feet and is cementing the outside of the 6⅝-inch, total depth 4,258 feet. Magnolia Petroleum Co. is drilling lime at 3,097 feet in No. 2 Rembert, Section 32-10-12. Moffatt and others are drilling No. 3 Moore, Section 5-9-12, at 3,050 feet.

Miscellaneous—S. P. Borden and others are rigging up to drill No. 1 Logan, Section 36-10-13, west of Pleasant Hill production. L. M. Emlet is waiting for 6⅝-inch plug to set, casing cemented at 3,535 feet, in No. 7 Bowman-Hicks, Section 17-7-14. Frazier and others' No. 1 Harris, Section 29-10-12, is still shut down at 3,290 feet, waiting orders after a show of gas with salt water, as is A. H. Tarver's No. 1 Long-Bell, Section 5-8-13, at 3,503 feet.

Webster Parish

Cotton Valley—Humble Oil & Refining Co. has rig up for No. 5 J. Babb, Section 14-21-10, and is fishing for liner lost in No. 1 Gray, Section 26-21-10, at 2,545 feet, planning to deepen the old gasser to the Trinity gas. Magnolia Petroleum Co. has shut down No. 1 G. W. Cole in 27-21-10, at 2,725 feet for repairs to the rig, strengthening it for a Trinity test; No. 1 D. G. Cox, Section 22-21-10, also is shut down at 2,715 feet, to change present rig for heavier equipment; No. 3 Cox, Section 23-21-10, is drilling a hard sand at 4,454 feet having passed up 2,500,000 feet of gas at 4,360 feet with hard lime in between that depth and present level; No. 5 Marshall, Section 21-21-10, is waiting for 6⅝-inch plug to set at 2,526 feet. Ohio Oil Co. has cemented 6⅝-inch casing at 4,250 feet in No. 4 Holloway, Section 23-21-10.

Sarepta and Shongaloo—Magnolia Petroleum Co.'s No. 1 Newsom, Section 32-23-9, began drilling November 7, and has 10¾-inch set at 429 feet; No. 1 Wise, Section 30-23-9, has cemented 6⅝-inch at 2,706 feet and No. 1 Haynesville Mercantile Co., Section 1-22-10, is drilling at 675 feet. Northwest Louisiana Gas Co. has made location 660 feet north and east of SW cor. SE, Section 29-23-9.

S. A. Lane retrieved a bit lost at 620 feet in No. 1 Miles, a wildcat in Section 24-17-9, and is drilling at 850 feet.

ARKANSAS

Nevada County

Humble Oil & Refining Co. has made location for No. 4-B Groves, 660 feet east and 330 feet north, SW cor., Section 1-14-21, and is rigging up. J. J. O'Brien's No. 1-B William Haynie, Section 6-14-20, has drilled plug at 1,198 feet and is waiting on standard rig with 20 feet of sand from 1,198-1,218 feet; No. 15-A Moss, Section 1-14-21, is waiting on standard rig with sand from 1,164-70 feet; No. 17-A Moss, 660 feet north and 200 feet west, SE cor. SW SE, Section 1-14-21, is rigging up.

McDonald and others' wildcat in Section 9-15-22, No. 1 Pelt, is still reaming to set casing for a test of sandy shale from 1,982-95 feet in which they had a small show of oil, the first time it has appeared in such formation in this locality.

Ouachita County

Smackover—Exchange Oil Co.'s No. 4 Berg, Section 4-16-15, set short string of 4½-inch at 2,588 feet, arranging to test 11 feet of sand from 2,588-99 feet. Phillips Petroleum Co.'s No. 19 Joyce, Section 33-15-15, coring at 2,696 feet. The Texas Company's No. 1 Davisson, Section 26-15-16, reamed to the bottom at 2,775 feet and is fishing for 4-inch drill stem.

Stephens—Brewer and others' No. 1 Curry, Section 32-15-19, shut down waiting orders for the past several weeks, is waiting for standard rig with 10 feet of sand at 2,191-2,201 feet.

Miscellaneous—A. T. Grayson's No. 1 J. W. Reynolds, Section 21-14-17, is shut down waiting orders after bailing dry on a show of oil and salt water in sand from 1,744-56 feet. Magnolia Petroleum Co. is drilling hard lime at 3,012 feet in No. 1 Stout Lumber Co., Section 28-14-16.

Union County

Smackover—Magna Petroleum Co.'s No. 6 Tatum, Section 7-16-15, tested salt water at 2,704 feet and is plugging back to 2,400 feet. Magnolia Petroleum Co.'s No. 7 Wilson, Section 17-16-15, is fishing for liner with 600 feet of salt water standing in the hole from 2,114 feet. C. E. Murdock is coring at 2,754 feet in No. 2 Murphy, Section 17-16-15, formerly reported as J. Marr's No. 2 Murphy, completed June 12, 1925, with 2,000 bbls. fluid, 90 per cent water at 2,500 feet. Standard Oil Co. has gone back to No. 24 H. Murphy, Section 4-16-15, formerly reported a 700-bbl. producer at 2,386 feet on June 2, 1925, and is drilling gumbo at 2,509 feet.

Champagnolle—A. Johnson test of Garrett-Modisett Drilling Co.'s No. 1 Gregory, Section 10-17-14, was dry with no showing at 2,560 feet and the crew is making hole again. E. M. Jones set 10-inch at 155 feet in No. 1 Crain, Section 2-17-14, and is drilling at 2,290 feet. Magnolia Petroleum Co.'s No. 2 Carroll, Section 1-17-14, last reported drilling at 1,150 feet, is shut down waiting orders at 1,500 feet. Ohio Oil Co. is drilling plug from No. 2 Crain, 1-17-14, with 4½-inch cemented at 3,013 feet to stop water flow from bad seat on the 6-inch at the same depth; No. 3 Crain in the same section, set 10-inch at 297 feet and is drilling at 820 feet; No. 4 is still a derrick and No. 5 has rig up; No. 1 Pumphrey, Section 1-17-14, is drilling at 1,905 feet. Rovenger Oil Corp. took a core at 3,041 feet in deepening No. 1 McCain in Section 4-17-14, and is arranging to set 4½-inch at 3,030 feet.

Miscellaneous—Grimes Brothers began drilling No. 1 Williams in Section 8-18-14, El Dorado East field, November 10. W. R. Keever is still waiting for standard rig for No. 3 Ezell, Section 12-17-15, with 600 feet of fluid in the hole from 5 feet of sand 2,131-36 feet; No. 4 has set 10-inch at 84 feet and No. 5 is still a derrick pattern. Pitcher and others' wildcat, Section 21-17-11, No. 1 Arkansas Timber Co., is drilling at 525 feet after killing an artesian flow at 320 feet.

EAST TEXAS

Harrison County

Waskom—J. R. Bahan is testing No. 3 Hickman, E. Pollock Survey, at 2,950 feet. Bethany Oil & Gas Co.'s No. 3 Richardson, 444 feet west and 557 feet north, NE cor., Joseph Story Survey, in the J. Yarnell headright, is rigging up to drill. Donley and others have derrick up for No. 1 Furrh on the Joel Libscomb Survey. Ford and others are setting 6-inch at 970 feet in No. 1 Furrh, E. M. Jenkins Survey. C. H. Lyons and others' test of No. 4 Bryson, T. D. Wilson Survey, was dry at 958 feet. Magnolia Petroleum Co. is coring blue lime at 2,388 feet in No. 1 Will Anderson in the Jacob Womack Survey; No. 2 J. M. Trosper, J. H. Harrison Survey, cored blue shale at 2,893 feet and No. 4 is a location 2,650 feet north and 560 feet west, SE cor., J. H. Harrison Survey. Simms Oil Co.'s

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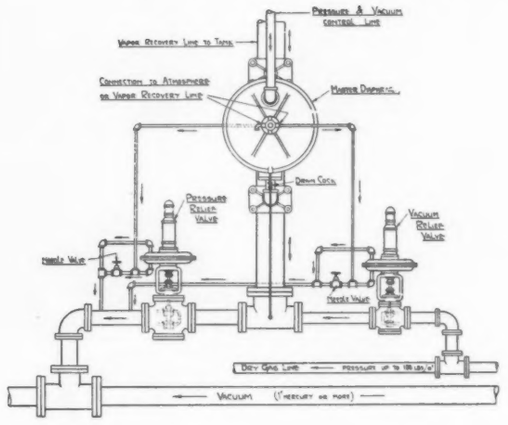

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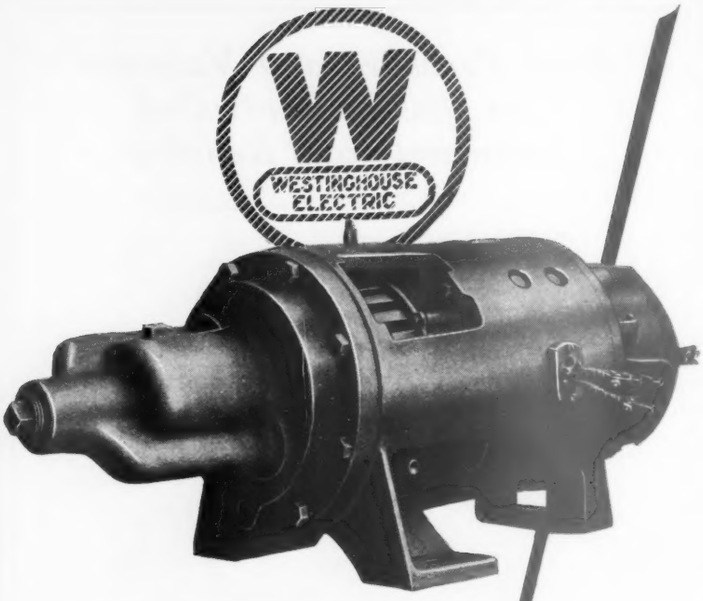

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No. 2 Z. Abney drilled 6-inch plug at 1,931 feet. State Line Oil & Gas Co.'s No. 1 Mullins in the T. D. Wilson Survey, is a derrick ; No. 5 C. M. Abney estate in the E. Little Survey, is drilling shale at 2,260 feet. R. W. Torrans set 8-inch at 967 feet in No. 1 Z. E. Vaughn, 1,000 feet south and 450 feet east, NW cor. W. R. Anderson Survey. Tylong Oil & Gas Co.'s No. 1 Vaughn in the W. R. Anderson Survey, is rigging up. A. L. Waller and others' No. 1 J. M. Bryson set 10-inch at 122 feet and is drilling at 500 feet; No. 2, 1,790 feet south and 580 feet west, NW cor. of the same survey, is rigging up.

Panola County

Bethany Oil & Gas Co. tested an estimated 3,000,000 feet of gas in No. 1 S. Burns in the W. A. Birdsong Survey, at 1,015 feet; No. 3 Richardson, 1,700 feet north and 600 feet east, SW cor., J. Yarnell Survey, tested 3,500,000 feet of gas in sand from 1,006-09 feet. Magnolia Petroleum Co.'s No. 1 Sarah Davenport, in the Jessie Dunlap Survey, cored shale and lime at 2,315 feet; No. 1 Lila Fletcher, 6,100 feet east and 4,300 feet north, SW cor., B. J. Jordan Survey, is drilling hard shale at 1,235 feet; No. 1 J. M. Trosper, 330 feet north and west NW cor., Andercon Survey, in James Shadoin headright, is bailing a salt water show at 1,987 feet. D. Thompson has cemented 6-inch at 2,250 feet with 40 feet of broken lime and sand from 2,290-2,330 feet in No. 1 Crenshaw, 3,460 feet west and 290 feet south, NE cor., Womack Survey.

LA.-ARK. WILDCATS

(Continued from Page 59)

cessful test of No. 7 Bowman-Hicks in Section 14-7-14, where he claims to have had a show of 40 gravity crude that filled the pit from 10 feet of sand at 3,535-45 feet. Last report was that 6⅝-inch casing is being run to set at 3,535 feet, the sand being one that has not heretofore been productive in other parts of the Shreveport territory. Emlet has spent about $500,000 in Sabine Parish in the past six or eight years and has drilled two or three almost commercial producers.

The last field report shows a number of wildcats on the verge of testing, but at the end of the week none had done so except A. T. Grayson, whose No. 1 J. W. Reynolds in Section 21-14-17, Ouachita County, Arkansas, bailed dry after a show of oil with lots of salt water at 1,756 feet and is shut down waiting orders. The Meekin sand that was so prolific in the Louann sector of Smackover evidently is not productive as far north as this well is located.

Faulkner County

Gold Creek Oil & Gas Co., which, under personal direction of Dr. D. L. Bower of Little Rock, has been working on a wildcat in Section 17-4-13, Faulkner County, near Conway, for the past year, claims to have topped a sand showing oil at 3,347 feet. With 10-inch casing set, the operators have advised they plan to pull it, set 10-inch and reset the smaller string for a test.

Memories of the Union Parish flurry of two or three years ago when considerable money was spent in the vicinity of Farmersville, when Gulf Refining Co. and two or three independent operators completed a half dozen wells as producers of small amounts of oil and larger amounts of salt water, are revived by reports of a show of oil in Carter & Goodwin's No. 1 Security, Section 7-23-1e. This wildcat cored 2 feet of sand at 2,250-52 feet, which showed oil; but the next 5 feet of sand was full of water.

Greenwood Production Co., whose No. 1 McCutchen in Section 15-17-15, Caddo Parish, was a failure as a 6-mile eastward extension of Greenwood gas territory, testing dry at 3,045 feet, has moved 7 miles northeast to a location in Section 15-18-14, 3 miles north of Shreveport, to drill No. 1 Ellerbe & Cooper. The location is 6 miles north and 6 miles east of the McCutchen well and to the northeast of the short-lived Cedar Grove gas field which had a spectacular but brief career as a shallow gas area in 1913.

H. M. Roark and associates, of El Dorado, have shut down on No. 3 Southern Minerals Co. on the west side of the Winnfield limestone dome, which they have proved to be a salt dome overlaid by limestone, in Section 19-11-3, Winn Parish. They lost a bailer at 450 feet and have not been able to get hold of it. Location is 100 yards west of and on the opposite (west) side of the limestone quarry from No. 2 on the same lease. No. 2 hit the top of the lime at 45 feet; No. 3 at 405 feet, having been in conglomerate paraffin shale with pyrites and fossiliferous lime and boulders—claimed to be the Cane River fossils—from 250 feet.

Nos. 1 and 2 were very much alike, reaching the top of the lime at 45 to 50 or 60 feet from the grass roots and staying in it until they hit rock salt at around 430 feet except for a thin lens of 2 feet of fine sand carrying a heavy saturation of sulphuretted hydrogen gas. The first 130 feet of this lime rock was calcite with a 12 per cent sulphur content, the logs much resembling those of the Union Sulphur Co.'s sulphur wells at Sulphur, La., except that where the latter had free sulphur the Winnfield wildcats found the sulphur as an impregnation of the lime rock.

East Texas Wildcats

East Texas wildcat operations were no nearer proof one way or the other than they were reported last week and Mississippi had but one wild flurry. Mississippi is not sufficiently attractive at this time to warrant expense accounts oftener than once or twice a month and the disposition is to let them alone until something exciting happens—and then it has to be more than a wild rumor. About the only well being given serious attention is Natural Gas & Fuel Corp.'s No. 1 Rye in Section 32-15-17, all the others having been shut down for various reasons at various depths for the past several weeks—or months. Natural Gas & Fuel Corp.'s well, however, was heard from during the week with a gas show at 2,445 feet and while small it nevertheless drew considerable attention. The show amounted to only about 20,000 feet, but as it was the second in this wildcat—the first having appeared at 2,250 feet—and the fact that there is a dry hole midway between it and Amory Petroleum Co.'s No. 1 Carter in 7-13-1, a commercial gasser, made it an interesting proposition. It is reported that casing is being set for a test but verification is lacking.

Shreveport Completions

Wildcat completions in Shreveport territory during the week were: Woodley & Collins' No. 1 Lincoln Land Co., Section 21-16-10, Bossier Parish, salt water and abandoned at 3,002 feet. This location is just inside the Bossier-Bienville Parish line on the east side of Lake Bisteneau in a locality where Lakeside Oil & Gas Co. completed two or three big gas wells at around 2,526-40 feet in 1921 and 6 to 8 miles east of Elm Grove production. A test at 2,495 feet showed salt water in 25 feet of broken sand.

Greenwood Producing Co.'s No. 1 McCutchen in Section 15-17-15 has been previously reported.

Holmes and others abandoned No. 2 Swope, Section 18-9-1e, Grant Parish, without drilling after building derrick.

Moody & Seagraves' No. 1 Jones, Section 15-18-7e, Richland Parish, also has been discussed.

Columbia County, Arkansas, supplied two abandoned wildcats, both dropped from the field report after standing temporarily abandoned for a period of weeks. Phillips Petroleum Co.'s No. 2 Davis in Section 6-18-20, formerly carried as Scott Phillips, is dropped as dry and abandoned at 2,145 feet and Smith and Compton's No. 1 Duffer, Section 35-19-19, carried for almost a year as temporarily abandoned at 2,116 feet likewise is stricken from the list.

NORTH LOUISIANA WILDCATS

Bienville Parish

Lake Bisteneau Gas Co., drilling No. 1 State, Section 16-16-10, tested 500,000 feet of gas at 825 feet and is drilling chalk at 1,170 feet. Louisiana Petroleum Co.'s No. 1 Hays, Section 18-16-5, is still shut down at 1,680 feet, and Ed-

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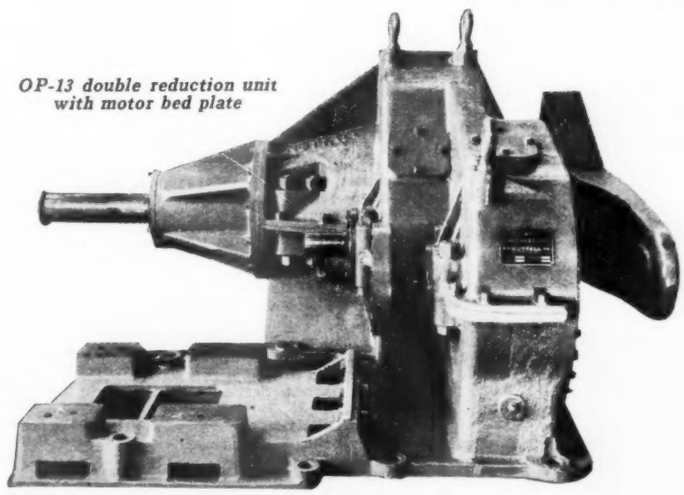

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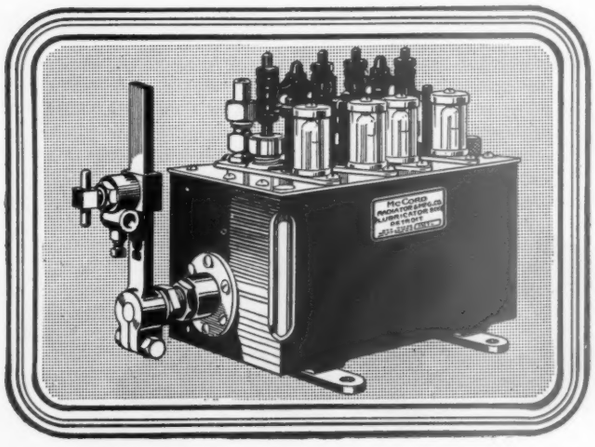


win J. Forest is shut down at 2,520 feet in No. 1 Perritt, Section 11-17-6.

Bossier Parish

Doern and others' No. 1 Bollinger, Section 9-22-11, is drilling at 2,830 feet. H. S. Goodwin, trustee, made a Johnson test at 1,800 feet in No. 1 Curtis, Section 2-16-13, without results and is arranging for another test of 7 feet of sand from 2,979-86 feet. Sales & Walker got a show of oil and gas with salt water in 2½ feet of sand 3,081-83 feet in No. 3 Bollinger and are shut down waiting orders. Walker and others' No. 1 Antrim, Section 28-22-13, is drilling at 2,260 feet.

Catahoula Parish

S. D. Hunter set 12½-inch at 105 feet in No. 2 Tensas Delta, Section 21-9-7e, and is drilling at 1,240 feet. Lochnager Oil & Gas Co. is arranging to plug back to 3,098 feet and whipstock No. 2 Beasley, Section 26-9-6e, bottom in gumbo at 3,318 feet. A test in this well showed only salt water in sand from 3,114-18 feet at the same approximate level in which No. 1, same lease and section, had a blow out of about 50,000,000 feet of gas and 15,000 bbls. of salt water. The same operators began drilling No. 1 McMillan, Section 29-9-6e, October 28, set 12½-inch at 127 feet and are drilling at 810 feet. Standard Oil Co. is in gumbo at 208 feet in No. 1 Tensas Delta, Section 23-8-5e.

Claiborne Parish

Magnolia Petroleum Co.'s deep test south of Haynesville, No. 1 Lee, Section 16-22-8, is in lime at 4,167 feet.

Grant Parish

W. D. Ball and others are rigging up to drill No. 1 Calhoun, Section 4-7-4w, about 6 miles northwest of Colfax.

West Carroll Parish

Palmer Corp. has rig up for No. 1 White, Section 2-19-10. Phillips Petroleum Co.'s No. 1 Marion, Section 32-20-9, is drilling at 2,800 feet.

Winn Parish

Ohio Oil Co.'s No. 1 Edenborn, Section 31-10-4, is washing total depth 1,813 feet and No. 2 Rolen, Acct. 1, Section 5-12-1, is in lime at 2,190 feet. H. M. Roark is shut down waiting orders on No. 3 Southern Minerals Co. in Section 19-11-3, with a bailer lost in the hole at 450 feet.

ARKANSAS WILDCATS

Calhoun County

Genther and others made a dry test with Johnson testing tool of 1 foot of sand, 2,328-29 feet, in No. 1 Stout Lumber Co., Section 3-14-16. Arkmo Oil & Gas Co. have shut down No. 1 Gossett, Section 29-21-8, Clay County, to refinance the undertaking after setting but not cementing 8-inch casing at 719 feet.

Columbia County

The Texas Company topped the Nacatoch at 1,803 feet in No. 1 Alexander, Section 8-17-19, and is drilling at 1,954 feet.

Faulkner County

An oil show in the top of a sand found at 3,347 feet is claimed by Gold Creek Oil & Gas Co., drilling No. 1 Stermer, Section 17-4-13, and arrangements are being made to set 8-inch.

Garland County

Chawood Oil Co.'s No. 1 Malvern Lumber Co., Section 17-25-17, has set 6-inch with packer to cut off a water flow at 635 feet, total depth 1,682 feet. H. H. Givan is fishing for bit lost at 3,025 feet in No. 1 Garrett, Section 1-3-19.

Miller County

Guest and others' No. 1 Saunderson, Section 14-15-26, is shut down for fuel at 896 feet. Lenz and others' No. 1 Mann, Section 22-15-26, is shut down at 2,889 feet for the same reason.

Pope County

Natural Gas & Fuel Corp. has location for No. 1 Whorton, 660 feet west and 460 feet south, NE cor., Section 7-8-21.

EAST TEXAS WILDCATS

Marion County

William Gross and others' No. 1 Baker, 975 feet east and 150 feet north, SW cor., John French Survey, is waiting on standard rig at 2,391 feet.

Shelby County

Magnolia Petroleum Co.'s No. 1 Pickering, W. J. Crane Survey, is shut down waiting orders at 3,025 feet. Sebastian and others' No. 1 Pickering, T. F. Polley Survey, is shut down waiting on 6-inch to set at 2,923 feet after a show of oil and gas under 2 feet of cap 2,920-22 feet.

MISSISSIPPI WILDCATS

Hightower & Goldstein's No. 1 Davis, Section 20-13-3, Chickasaw County, set 10-inch at 296, drilling at 400.

Ben W. White's No. 1 Old Hen, tested dry with no show and is shut down for funds at 694 feet in Section 36-10-4, Claiborne County. Mid-Southern Oil Co.'s No. 1 Lewis, Section 12-15-5, Hines County, is shut down at 510 feet. Itawamba Oil Co.'s No. 1 Evans, Section 16-10-10, Itawamba County, is a derrick. Bassfield Oil Co.'s No. 1 Burkett, Section 14-6-18, Jeff Davis County, is drilling below 2,450 feet. Baker & Adkins' No. 1 Gunn, Section 13-7-16, Lauderdale County, last reported in green sand at 2,198 feet. J. P. Evans' No. 1 Whitesides, Section 16-9-7, Lee County, set 10-inch at 518 feet and is drilling below 1,003 feet. Lee County Petroleum Co.'s No. 1 Hickman, Section 12-8-6, Lee County, last reported drilling at 492 feet as of November 3. Amory Petroleum Co.'s No. 1 Dill, Section 12-13-18, Monroe County, at last report was fishing for cable tools at 2,270 feet. Amory Petroleum Co.'s No. 1 Hall, Section 8-13-17, Monroe County, reported cleaning out at 2,404 feet. Natural Gas & Fuel Corp.'s No. 1 Rye, Section 22-15-17, Monroe County, reported small show of gas at 2,445 feet.

KANSAS FIELDS

(Continued from Page 52)

for 450 bbls. in sand at 2,122-84 feet after a shot of 160 quarts. Empire Oil & Refining Co.'s No. 3 Ott, NW cor. Section 25-22-12, made 300 bbls. after it was shot with 240 quarts in sand at 1,628-94 feet. Phillips Petroleum Co.'s No. 1 Nuttle, SW cor. SE SW Section 11-23-9, is a 75-bbl. well in sand at 2,292-2,344 feet. Polhamus and others' No. 7 Taylor, SE cor. SW SW Section 35-25-10, had sand at 1,285-97 feet and made 25 bbls. Rogers and others' No. 2 Hayes, Lot 9, Block 6, Section 35-25-10, has been completed for 5 bbls. in sand at 2,018-65 feet. Flintridge Petroleum Co.'s No. 3 Weirsching, CEL SW SW Section 23-26-9, has been shut in for 500,000 feet of gas in sand at 787-805 feet. Rogers and others' No. 1 Wyant, SE cor. NW Section 2-26-10, made 50 bbls. from sand at 1,970-2,025 feet.

Marion County

Lariaux and others' No. 1 Weston, SW cor. NW NW Section 23-17-4, is drilling at 300 feet. Crow and others' No. 2 Townsend, NW cor. NE SW Section 31-21-4, has been abandoned at 2,620 feet.

Morris County

Faulders and others built the rig for No. 1 Wendt, SW cor. SE SE Section 18-15-5. Moss & Nelson have the rig on the ground for No. 1 Blank, SW cor. Section 10-16-5. Graham and others have erected the rig for No. 1 Nelson, NE cor. SE Section 30-17-5. Phillips Petroleum Co.'s No. 1 Nelson, NE cor. SE SW Section 16-17-5, has been abandoned at 2,747 feet.

Reno County

Pryor & Lockhart's No. 1 Kessling, C NE Section 35-22-10w, is dry and abandoned at 4,085 feet.

Rooks County

Hartman & Skaer made location for No. 1 Bice, C NE Section 16-10-7w.

Russell County

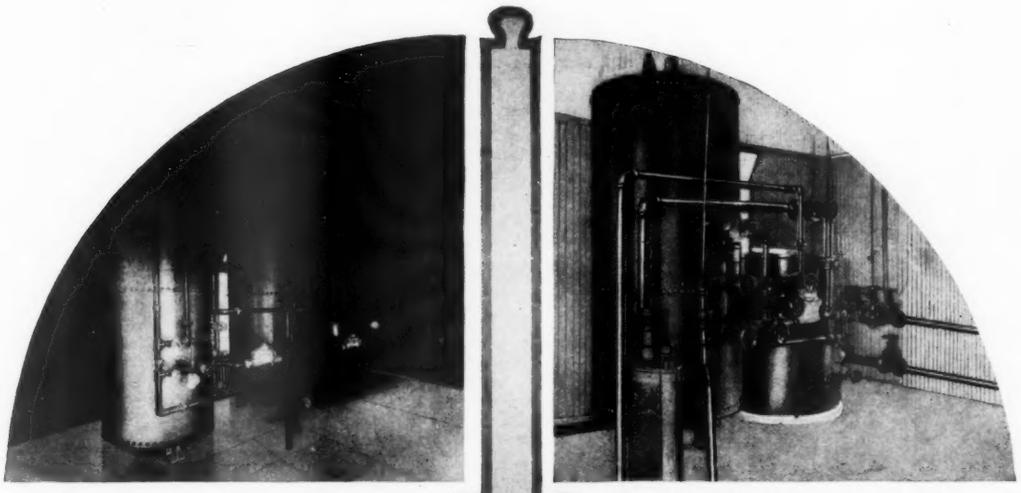
Mid-West Refining Co. made location for No. 33 Baxter, SE cor. SW NE Section 32-13-15w. Streeter & Stearns' rig is under construction for No. 1 Mermis, SW cor. NW SW Section 33-13-15w. Midwest Refining Co. made location for No. 3 Mermis, NW cor. NE NE Section 5-14-15w.

Sumner County

Champlin Oil & Refining Co. has the rig up for No. 2 Love, NE cor. NW SW Section 9-30-2w. DeFrost Drilling Co. made location for No. 1 Riner, NW cor. Section 36-30-2w.

Wabaunsee County

Braden, McClure and others' No. 1 Blank, C SE SE Section 9-12-10, is a dry hole at 2,338 feet.



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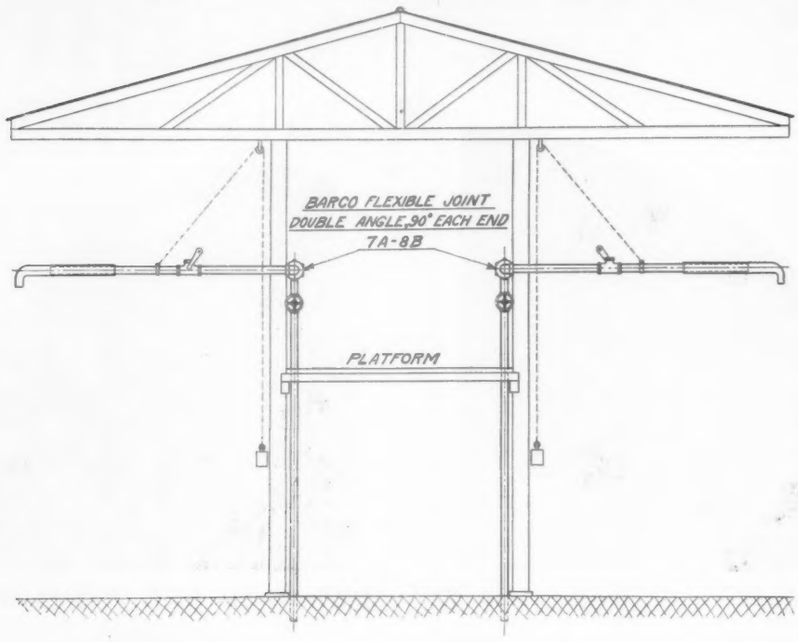
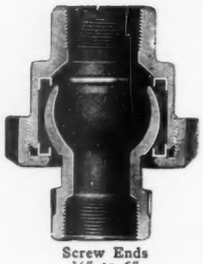
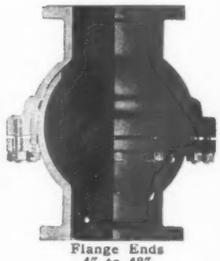
ZEOLITE AND LIME SODA SOFTENERS · PRESSURE SAND FILTERS ·
BOILER FEED WATER TREATMENTS · HOUSEHOLD WATER SOFTENERS ·




Screw Ends
¼" to 6"


Flange Ends
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Barco Flexible Joints on loading racks

7-8
Female Joint
¼" to 6"

"NEVER found anything to compare with Barco Flexible Joints on a loading rack for flexibility and durability." That's the report of one refiner. The ball joint permits free movement in any direction—a time-saving feature. The gaskets will last indefinitely without leaking.

This is only one of the uses for Barco flexible joints in the oil field and the refinery. Put them on any gas, oil, air, or steam line where expansion or vibration have to be contended with. Your experience will convince you of their economy.

Catalog No. 202 describes these joints. Ask for your copy.

7A-8
Angle Joint
¼" to 6"

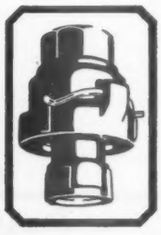
7-8B
Female Joint
90° Ball
⅜" to 4"

7A-8B
Angle Joint
Angle Both Ends
¼" to 4"

Barco Manufacturing Company
1801 Winnemac Avenue, Chicago, Illinois

See our exhibit at the New York Power Show, December 5 to 10. Also visit our booths 116 and 118 at the 1928 Chicago Power Show, February 14 to 18.

BARCO



Valves and Joints

O&GJ 11-17-Gray

CONTRACTS FOR CONSTRUCTION OF DENVER GAS LINE BEING LET

By B. E. V. Luty

PITTSBURGH, Pa., Nov. 14.—The long talked of Amarillo-Denver natural gas line has been placed with the National Tube Co. It involves approximately 350 miles of 22-inch line pipe, about 100,000 net tons. Contracts for construction are being let. The pipe line company is the Colorado Interstate Gas Co., controlled by the Standard Oil Co. of New Jersey and the Prairie Oil & Gas Co. The local distributor for Denver and other towns is the Public Service Co. of Colorado. Gas will be supplied to dwelling houses and for industrial uses, the largest consumer being the Colorado Fuel & Iron Co. at Pueblo, Colo. It is understood deliveries will extend over a period of about a year. As capacity for making this size is relatively limited, the National Tube Co. is expected to begin production at once.

Rumors referred to a week ago are confirmed as to standard pipe being commonly subject to 2½ per cent more trimming than a few weeks ago, and are apparently erroneous as to anything additional being given on oil country tubular goods. The market now stands at 5 per cent additional trimming on standard pipe and 10 per cent additional trimming on oil country goods, beyond those in force on April 19, 1923, when the present card on standard pipe and the lists on oil country goods were promulgated. The original trimming stood until this year, with occasional spells of shading. If these trimmings now hold, the occasion for new published cards and lists will be obviated.

Steel Market Steady

The steel market as a whole shows practically no change in the past week or two. Demand has fallen off a trifle in some lines, but the experience of the past four months shows emphatically that favorable and unfavorable items in the steel trade have been exaggerated. What the steel trade has done since July 1 has been to make a record for steadiness in production unparalleled in the entire history of the industry, and efforts to suggest improving conditions or a tendency to slump are altogether discredited. Such efforts cover up the real showing, which is one of unprecedented steadiness. The official monthly reports of steel ingot production, July to October inclusive, show an average daily rate of 127,588 gross tons per working day. The high month, August, ran only 1.5 per cent above this average, while the low month, September, was only 1.8 per cent under the average, and October was just one-tenth of 1 per cent under the average.

Ordinarily some seasonal decrease in production should be expected for this month and next, but only a small decrease, and the Ford Motor Co.'s getting into quantity production may cause an upturn before the end of the year. The influence of the event, when it does come, will be very far-reaching. In any case, increasing steel demand is to be expected after the turn of the year.

Finished steel prices have been showing irregularities for a long time, but the loss from week to week is almost insignificant and there are possibilities that on the whole the market is a shade firmer than a fortnight ago. Reference is made to the fact that structural steel for the new Hudson River bridge at New York went at the regular price of 1.75 cents, Pittsburgh, but the extended deliveries involved may have been a factor in preventing concessions. Black sheets are easier, being quotable at 2.80 cents to 2.90 cents, against 2.90 cents quotable for several weeks. They merely follow galvanized sheets, which have lately been at 3.65 to 3.75 cents. Automobile sheets are steady at 4.15 cents and are expected to stay at that level.

EASTERN FIELDS

(Continued from Page 66)

Elroy district, Tyler County, J. D. Foley has made a location on the Rebecca Singer farm. In Freemans Creek district, Lewis County, the Moran Drilling Co. has started to drill on the M. P. Church lot.

In Sherman district, Calhoun County, W. S. Dailey is drilling a test on the Charles Robinson farm. In DeKalb district, Gilmer County, C. B. Lewis & Co. have started to drill on the F. Davis farm. In Center district, the Ohio Fuel Supply Co. is drilling to the lower sands on the A. M. Coberly farm. In Murphy district, Ritchie County, Beall & Bickerstaff have rig material at a location on the W. E. Cox farm. In Lee district, Calhoun County, McIntosh & Scott have a rig up on the Amy Haymaker farm. In Otter district, Braxton County, the Brownwell Corp. has shut down at 1,710 feet at a test on the J. M. Boggs farm.

In Carroll district, Lincoln County, W. C. Kingery & Co. are due in the Big Injun sand on the W. C. Kingery farm. In Sheridan district the West Side Gas Co. is still fishing for a string of tools on the Louisa Mitchell farm. In Ten Mile district, Harrison County, Orlando West has made a location on the Charles Lanhan farm. In McClellan district, Doddridge County, the Manufacturers Light & Heat Co. is due in the Big Injun sand on the W. F. and A. Farr farm and the rig is completed for a test on the Josephine Boyce farm.

Southwest Pennsylvania

All late completions in southwest Pennsylvania are gassers, located in Greene County. In Whitely Township, the Carnegie Natural Gas Co. has completed in the Gordon sand a test on the C. P. Rose farm. It is a gasser in the Gordon sand. The same company has completed a second test on the Cumberland Coal Co.'s property and a test on the Frank Blaker farm. The first is a gasser in the Gordon sand and the second in the Big Injun sand, each good for 700,000 feet.

In Perry Township, Greene County, the Peoples Natural Gas Co. has completed in the Gordon sand a test on the Knott heirs' farm. It is a gasser good for 800,000 feet. In the same township, the Philadelphia Gas Co.'s No. 3 on the R. F. Johns farm is a gasser good for 700,000 feet in the Gantz sand.

In North Strabane Township, Washington County, the Wasco Fuel Oil Co. has completed a test on the Ross D. Leonard farm. It is a very light pumper at a total depth of 2,700 feet. In Franklin Township, Greene County, the Waynesburg Home Gas Co. has a duster in all sands at a second test on the Austin Johnson farm.

In Gilmore Township, Greene County, the Dunard Valley Gas Co. has a gasser in the Gordon sand at a second test on the Harry Lemon farm. In Morris Township, Sutton, Mong & Co.'s second test on the Hettie Sprowls farm is a gasser in the Big Injun sand.

In Springhill Township, the Springhill Oil & Gas Co. has a gasser in the same formation at a test on the A. M. Snyder farm. In Jackson Township, Edward Milligan & Co. have a Big Injun sand gasser at a test on the Charlotte Smith farm.

In Findley Township, Allegheny County, the Link Oil & Gas Co. has drilled a second test on the Kahle farm through the fourth sand. It is a very light gasser.

In Gilmore Township, Greene County, the Manufacturers Light & Heat Co.'s second test on the J. M. Strawn farm is dry in all sands. In Springhill Township, the same company's test on the Mary Insminger farm is a gasser in the Big Injun sand. In Morris Township, the Carnegie Natural Gas Co. has a gasser in the Gordon sand at a test on the John M. Clutter farm. In Whitley Township, the Peoples Natural Gas Co.'s test on the Margaret Fosmark farm is dry in all sands.

This is another of a series on specifications—keep for reference in ordering.

BARSCO PRODUCTS

for Oil and Gas Well Drilling

Pin End

ROTARY TOOL JOINTS

(Patented)

Box End

Forged Steel

Construction

The "pin" is tempered to a special specification and hardened to withstand the most severe usage.

The *forged steel* from which this joint is built has a tensile strength of from 90,000 to 110,000 pounds.

Size Pipe, Inches	Length, Inches	O. D. of Joint, Inches	Size of Taper, Inches	No. of Threads, per Inch	Weight, Pounds
2½	15	3⅛	2 x3	5	45
3	15	4¼	2¼x3¼	5	55
4	18	5¾	3½x4½	5	70
4	20	5¾	3½x4½	5	75
6	18	7¾	5 x6	4	130
6	20	7¾	5 x6	4	155
6	24	7¾	5 x6	4	175

Joints of other sizes, length or thread other than specified above can be furnished. When ordering, state make, size and weight of rotary pipe on which tool joint is to be used.

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The crop ends of each piece of Republic Wrought Steel Pipe for the oil country are cut off and crushed to determine the soundness of the weld and the ductility of the steel.

This is one of the several tests to make sure that every joint of Republic Pipe is of good quality.

Tubing—
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WRECKED PIPE LINES REPAIRED IN TERRITORY SWEPT BY FLOOD

By Nell Williams

SHREVEPORT, La., Nov. 14.—Where the sudden break in the Atchafalya River levee at Melville, La., last May 17 loosed a torrent of flood waters that engulfed the pipe lines and pump station there, normal operations again are being conducted by the Standard Pipe Line Co.'s main artery of crude transportation from Oklahoma and North Louisiana to anchorage, from where the Standard Oil Co. of Louisiana's refinery in Baton Rouge gets its crude.

Although the region affected still bears the scars of the worst flood in its history, the station and the lines themselves have been put in operation at full capacity. Within three or four weeks after the crevasse was formed, swamping the station, and another break May 24 at McCrea washed out the lines, temporary repairs were effected, making some movement of crude south possible, but it has taken more than four months for complete rehabilitation.

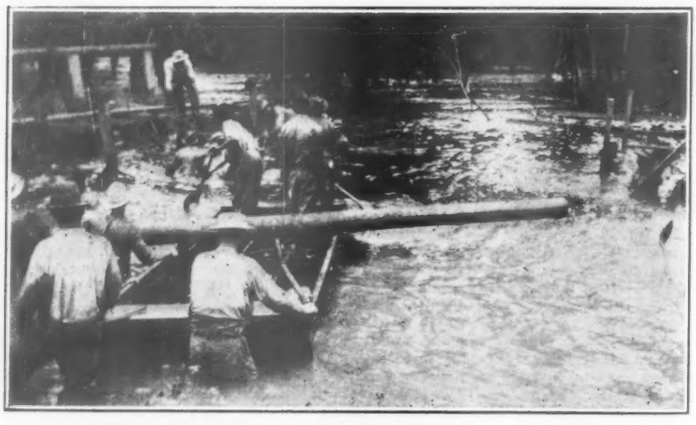
The damage at Melville probably was the most devastating suffered by any individual oil company in the flood. The station, together with the 16-acre tract on which it is located, was buried under 15 feet of sand and water, and when the water receded rapidly all engines, pumps and other equipment were left covered by thousands of tons of fine sand and silt. The raging torrent freed by the McCrea break a short distance up the river on the opposite side, swept out four of the six 8-inch lines which run out of the station and put a fifth out of commission by breaking a gate.

The washout of the lines was not at the river crossing proper, but on the side of the river opposite Melville, the damage being done by the sweep of the water from the McCrea crevasse. Company officials emphasize the fact that all its river crossings held during the flood. Two 12-inch lines bring the crude into the station from the northwest while the six 8-inch lines run out of the station.

The station and equipment had been prepared for high water such as had been experienced in previous floods, and windows and doors had been bricked up to hold out the encroaching back waters on the far side. But the levee break was unexpected, and without warning the wall of water struck it, forcing a complete shutdown. At first it was doubtful whether the station ever could be reclaimed.

Showing how connections were made and the line laid across a railroad trestle which withstood the flood.

To get the lines and station back into operation was a difficult task. First it was necessary to repair the lines temporarily and hurriedly so as to start the movement of crude south again as quickly as possible. These lines had been running approximately 90,000 bbls. of crude daily to the refinery at Baton Rouge, a vital factor. The second big job was to excavate thousands, possibly millions, of tons of sand silt deposited around the station and equipment when the water receded.



Repairing the Standard Pipe Line Co.'s lines in the swift water at Melville.

Entire Country Submerged

Although the entire country around there was under water up to 15 feet deep and the lines to be repaired had to bridge at least 200 feet of very swift current, steps were taken immediately after the washout to establish connections. Louisiana and Arkansas pipe line layers long have been accustomed to the problems and hardships of crossing swamps, but spanning such a torrent as this under flood conditions called into play the utmost resources of the Standard Pipe Line

(Continued on Page 164)

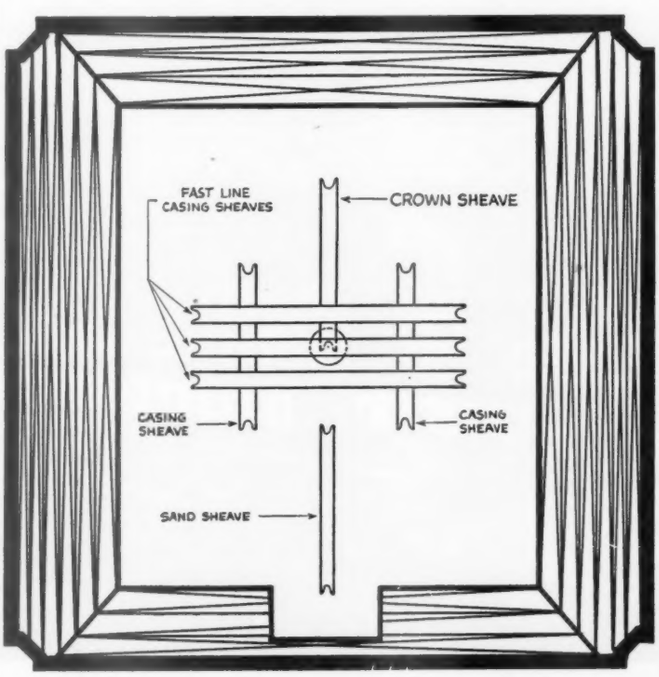
Feature No. 6
Crown Sheave over *dead center*

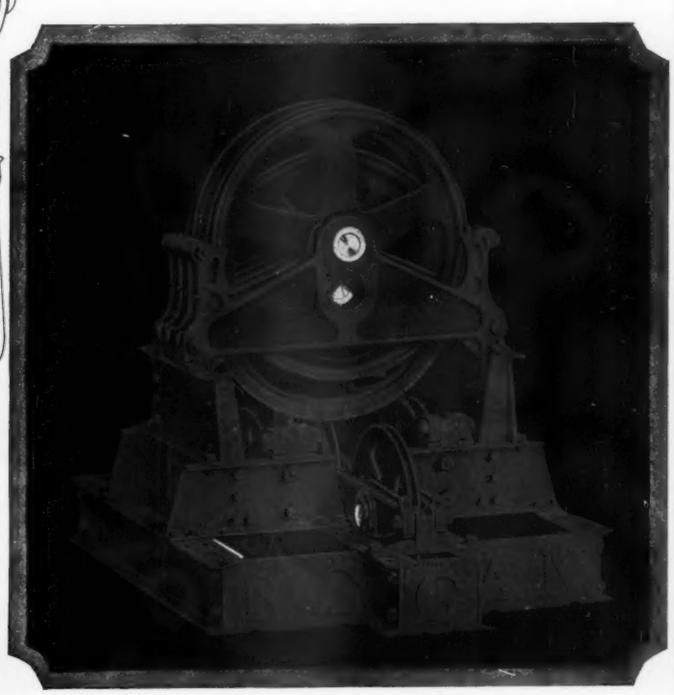
All sheaves are set symmetrical, which allows the Block, when strung in any manner, to hang in the middle of the Crown. Crown sheave can be used to plumb the center of hole by dropping cat line. The Traveling Block and cat line, having a common center, can be used interchangeably without shifting the Crown Block.

Watch future advertisements for additional features.

Write for descriptive literature.

Regan's *new* Crown Block





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Lasting Protection *Since* '81

In 1881 . . . when The Arco Company first began making paints and protective products . . . a high standard of manufacturing was decided on.

Since that time, the quality of Arco products has never varied . . . the standard has never been lowered.

During these 46 years of careful formulation and manufacturing, Arco has perfected 6,819 different paints and protective finishes. Many of them were formulated especially to meet the severe conditions found in the oil and gas industries. These products will enable you to conquer rust *positively* and *permanently.*

Before you refinish your tank cars, tanks, machinery, pumps and other equipment . . . call on our technical department for help. *Why not do it today?* Then you will be sure to have this information handy when you need it.

THE ARCO COMPANY • CLEVELAND, OHIO
PAINTS • VARNISHES • ENAMELS • LACQUERS

(80)

Turn the pages and you see all Arco lines!

ARCO

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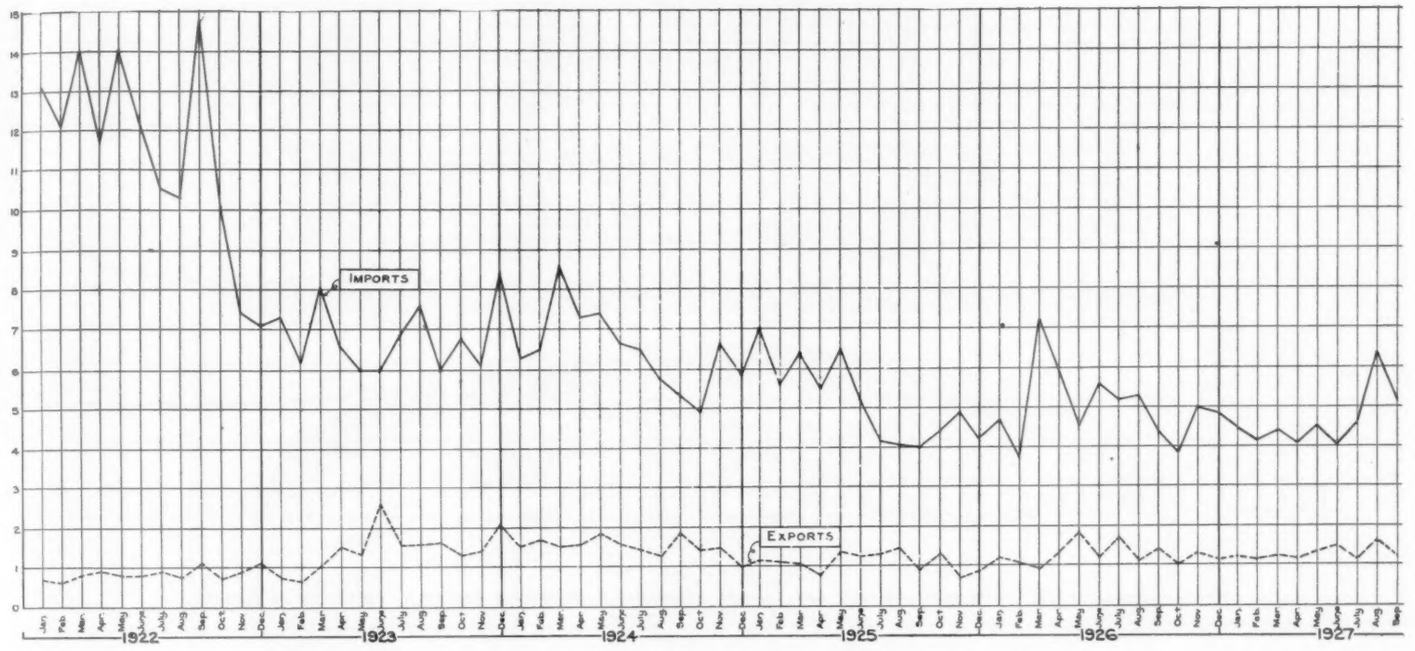
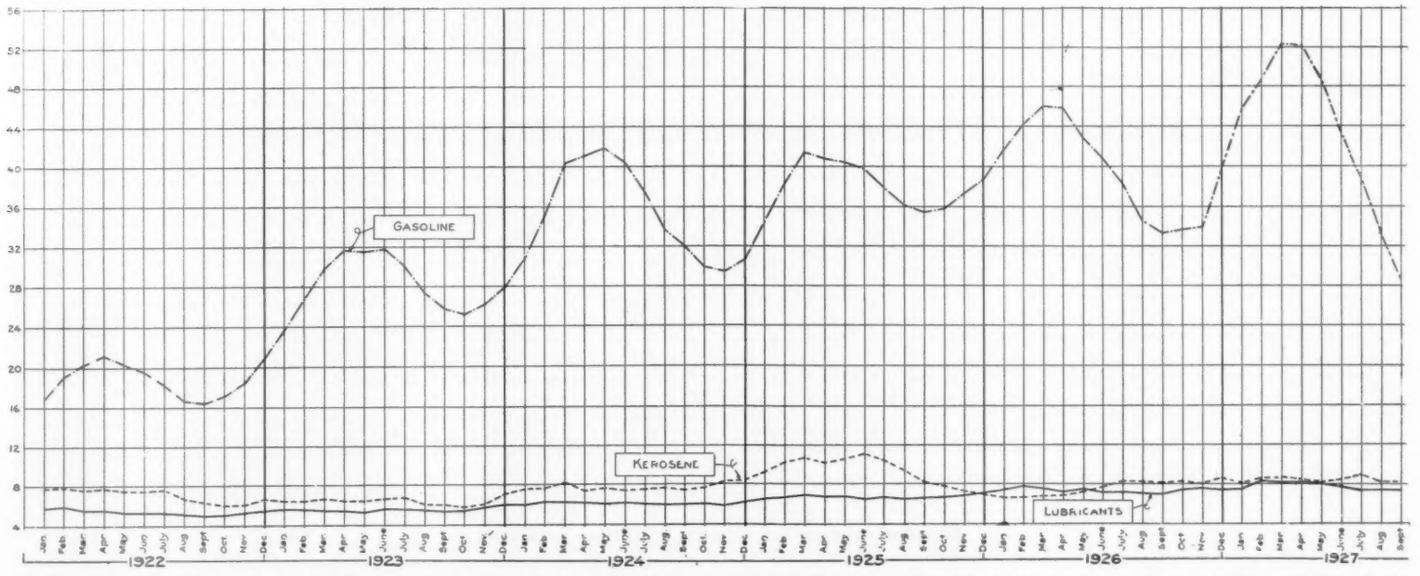
Graphic Analyses of Crude Oil and Refined Products

Based on Bureau of Mines report. Graphs include data up to November 1, 1927.

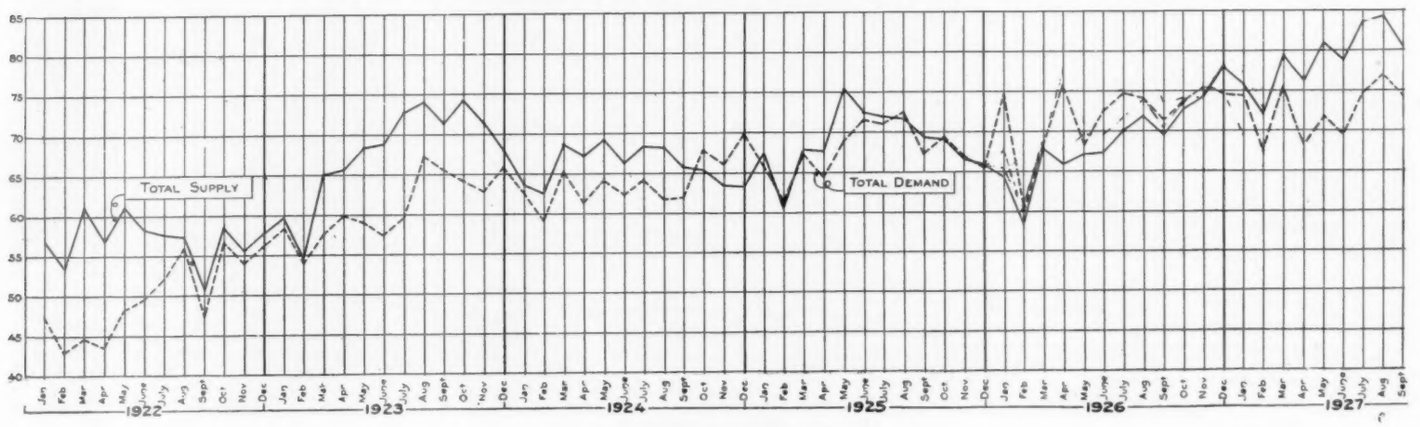
Crude oil imports and exports. (Millions of barrels.)



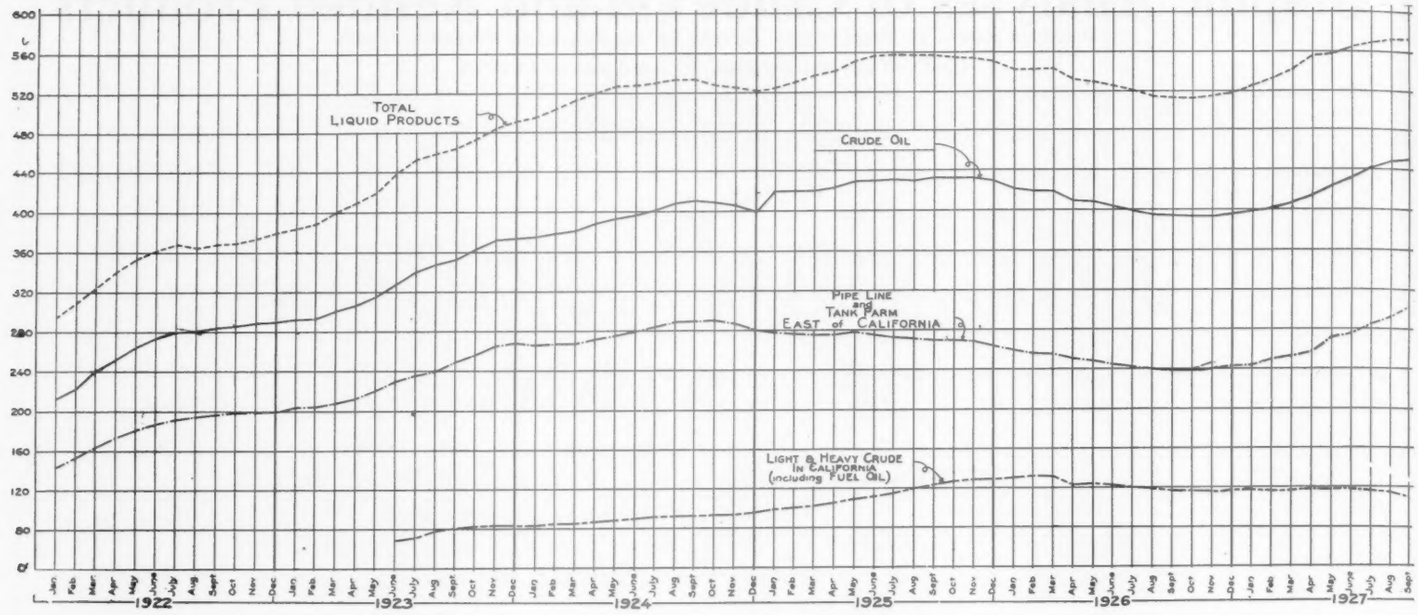
Gasoline, kerosene and lubricating oil stocks. (Millions of barrels.)



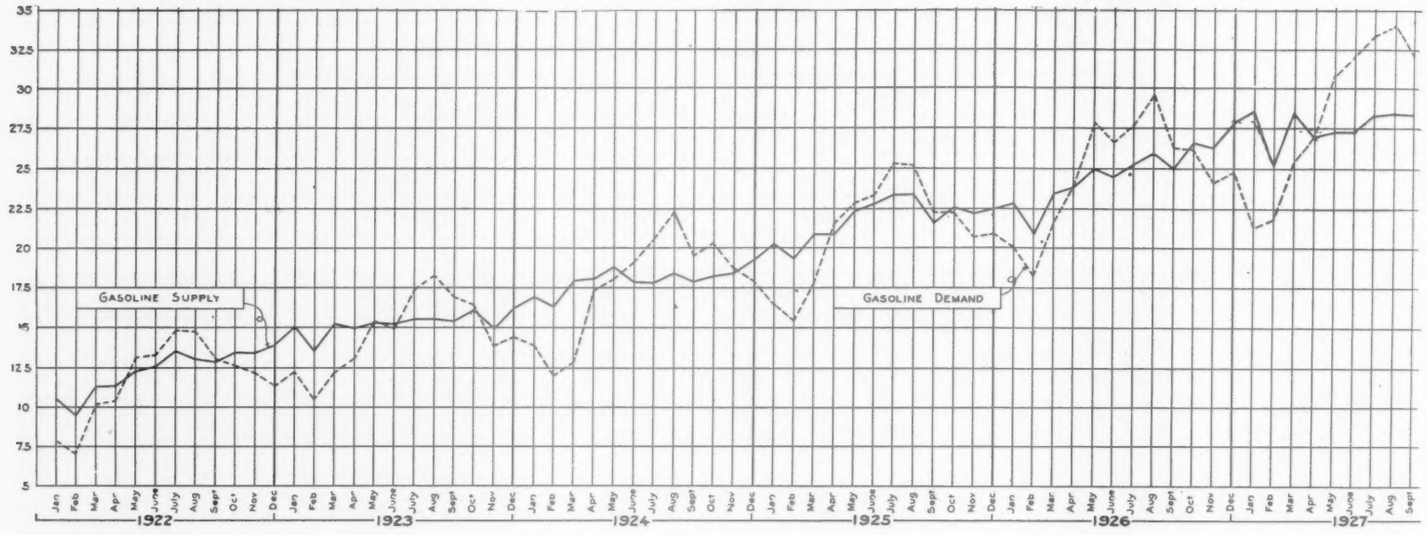
Crude oil supply (domestic production plus imports) and demand (domestic consumption plus exports). Data on demand include California fuel oil starting January 1, 1925. (Millions of barrels.)



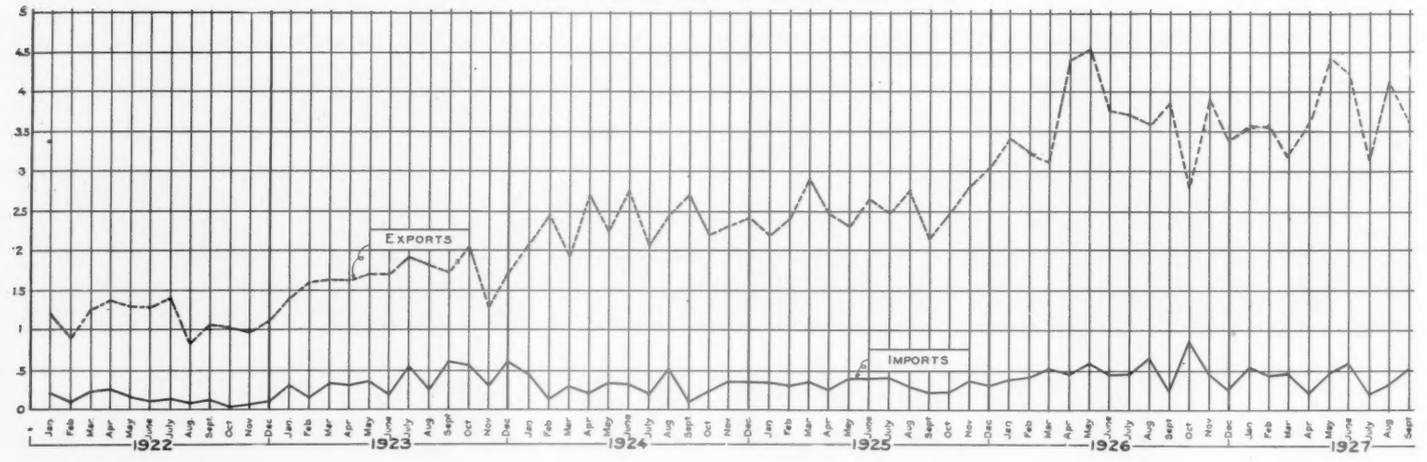
Crude oil stocks. The total liquid stocks given in line "Crude Oil and Refined Products" consists of all crude oil and refined products reduced to barrels. (Millions of barrels.)



Gasoline supply (production plus imports) and demand (domestic demand plus exports). (Millions of barrels.)

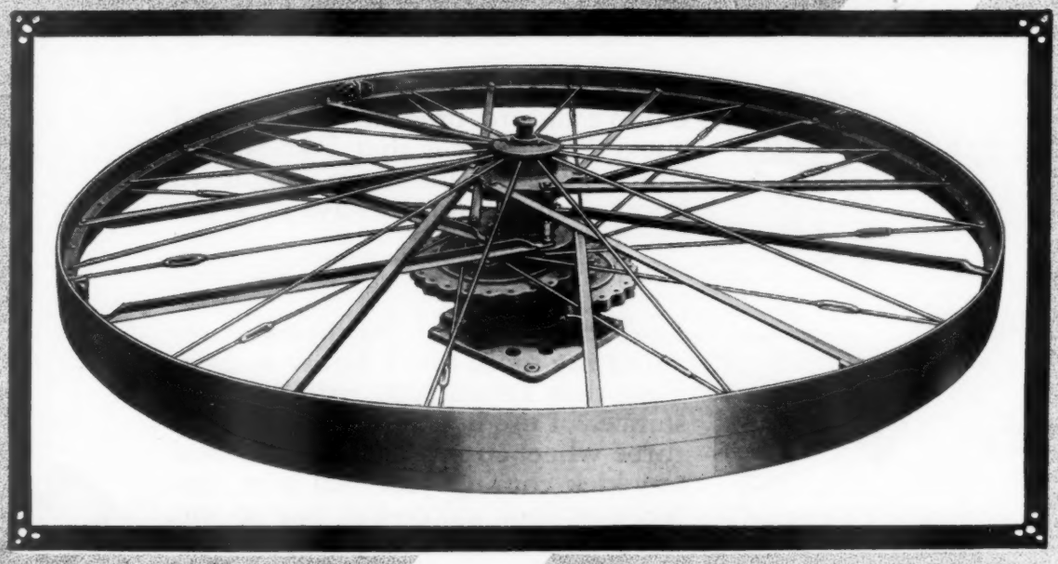


Gasoline imports and exports. (Millions of barrels.)



(Kerosene Production Graph, Page 111)

TICO BAND WHEEL POWERS



The new Tico 18 and 20 foot Band Powers have the greatest assembly of exclusive advantages ever assembled in a single piece of oil field equipment.

For Example:

The Band Wheel Rim is made of rolled steel angles riveted together forming a crown that holds the belt in position—an exclusive Tico feature.

It is the stiffest rim ever used on band wheel powers maintaining perfect roundness under all belt loads.

The driving angles are arranged on the bicycle principle giving the most efficient type of hub drive.

The shaft has a long bearing in a base, allowing rim and shaft to be withdrawn from base without dismantling.

The Tico Power is provided with a dual oiling system—both force feed and gravity feed.

Tico Powers are equipped with belt tighteners.

Every progressive oil man will find it profitable to investigate the Tico Power —it has many other advantages.

See your Continental Supply man today.

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TRIMO

The Pipe does some talking:

Hey Trimo, you sure stand in with the boss. There are half a dozen pipe cutters around the shop here, but he wouldn't start cutting me up until he found his Trimo. How do you rate so high?

Trimo Pipe Cutter's answer:

I don't like to brag, my boy, but I guess the answer is that I know my stuff. A pipe like you ought to know that a Trimo always cuts fast and clean.

The Workman's comment:

I get kidded a lot for being fussy about my tools, but I know it pays. Take that Trimo pipe cutter for instance. I use it as a one wheel or a three wheel cutter and I never had any kick coming yet. All pipe cutters may look alike—but not to me. Give me a Trimo every time.

TRIMO

America's Leading Wrench Makers for Nearly Forty Years

TRIMONT MFG. CO., INC.
ROXBURY (BOSTON), MASS.

GENERATING APPARATUS IN CALIFORNIA COMPANIES

(Continued from Page 81)

value. Furthermore, at present there apparently is no appreciable demand for coke in California, particularly in the southern part of the state. Also coke is too expensive for use as water-gas generator fuel in competition with coal; this will be true until the coal-gas is worth so much for enriching purposes that coke can be made at an unusually low cost—a larger percentage of operating costs being charged to the gas, or an increase shown in the credits from the shale of gas and by-products other than coke. A small percentage of coke can be used to good advantage in making water-gas when using bituminous coal as the main generator fuel.

California Coals

The coals of the state and neighboring states have been studied and some were tested. Likewise the practicability of importing coal from foreign countries and from eastern states (shipped via water route through the Panama Canal) has been considered. The conclusions are:

(a) The coals of California are not well adapted for use in gas-making processes now in common use. The best coal is found in Monterey County but the sulphur content is high, prohibitively so until new purification processes are developed. This coal can undoubtedly be used mixed with other fuels as a coking coal. The other coals are sub-bituminous to lignitic, and are not only noncoking but in many instances slack upon storage in the air and are subject to spontaneous ignition; they usually have high percentages of sulphur, moisture and ash and yield a poor quality of both gas and char upon complete carbonization.

(b) The coal beds are folded and faulted to a degree materially affecting mining and tending to cause high mining costs.

(c) Tests made indicate that the sulphur and ash content of California coals cannot be materially lowered by washing on a commercial scale.

(d) Coal of good quality and suitable for the manufacture of either coal-gas or water-gas can be obtained from Australia, Utah and probably from eastern states at competitive prices.

(e) Coal in lump size is not available from the State of Washington. On account of folding, faulting and the broken condition of the beds, and the friability of these coals, an excessive amount of fines are produced in mining and lump coal is at a premium. In general the best coals of that state are high in ash and are not so well adapted for making coal-gas as the coals from Utah and elsewhere. However, there are in Washington and British Columbia (Vancouver Island) coking coals which can be used in the manufacture of coal gas.

(f) Alaska coal is not now available at a low enough price to be of interest, and probably will not be for many years.

(g) Eastern coals will probably be available in California because the shipments of lumber to eastern ports is volumetrically much greater than return cargoes and a full load returning is desirable; in other words, the boats carrying lumber from California East can economically carry return shipments of coal at a rate which will be of interest to the gas industry.

Carbureted Water Gas

It is strictly not the intention to recommend particular units for carbonized coal or for making water-gas. Until a very recent date there has been but little difference in results obtainable in making carbureted water-gas, and personal preference has been based on more or less minor details. However, there is appreciable difference in types of carbonizing apparatus marketed for coking coal, such as horizontal, inclined and vertical retorts, and different types of by-product coke ovens. Which one is preferable for use in the different plants in California will depend largely upon, and vary with local conditions. The author believes that it is good judgment in selecting a particular oven or retort to choose that type best adapted for use with the greatest variety of coals, for under emergency conditions it may be necessary to carbonize coal which would not otherwise be deemed suitable, and which could not be used at all in certain types of ovens.

The influence of increasing cost of gas-oil upon gas standards has been considered, and it seems that in the future the gas supplied to replace straight oil-gas will have a higher specific gravity and a lower calorific value than oil-gas as now made. The ideal standard will not be the same in all locations, at least not for some time to come, because of local conditions, but in general the relative costs of oil and coal will be the determining factors; the higher the cost of oil with respect to the cost of coal, the more economic it will be to decrease the calorific value and specific gravity of the gas in maintaining good service, the conclusion is that in spite of the difference in specific gravity, it is feasible to distribute mixed oil-gas and carbureted water-gas. Any necessary burner adjustments should be made to burn gas substantially midway the extremes of fluctuation.

Attention is called to the fact that both carbureted water-gas and oil-gas with a given calorific value of say 500 or 550 B.t.u. per cubic foot, can be generated, in their respective generators, with a specific gravity varying over an appreciable range.

In considering gas-making processes in which so-called "valuable" liquid by-products are recovered, it should be remembered that manufactured gas is sold at a higher price per B.t.u. than any of the crude or semirefined by-products. Usually it costs less to deliver the gas than to refine or prepare the by-products for market and deliver them.

In making 550 B.t.u. city gas, the oil requirements of the oil-gas process and the carbureted water-gas process are, respectively, about 8 gallons and 3.3 gallons per 1,000 feet of gas. In view of the "oil situation," this fact alone is sufficient to warrant gas companies giving careful consideration, if not preference, to the latter process in the construction program for the immediate future.

Oil is gasified in the carburetion of water-gas with a higher thermal gasification efficiency than in the oil-gas process. In the manufacture of carbureted water gas with a calorific value of 550 B.t.u. per cubic foot, the carbureting oil contributes approximately 100,000 B.t.u. per gallon of oil, whereas in making 550 B.t.u. oil-gas, each gallon of oil contributes only 68,750 B.t.u.—allowing 8 gallons as the total oil used per 1,000 feet of oil-gas. This is another reason why the gas industry should look with favor upon the carbureted water-gas process, which is in harmony with principles of conservation.

In making mixed water-gas and oil-gas or mixed gas containing water-gas and oil-gas, it is possible to crack the oil used in making the oil-gas portion with higher efficiency than is now common practice. In other words, some of the well-founded reasons now prevailing for not making richer oil-gas will no longer apply as they do in making and distributing straight oil-gas.

The cost of gas (carbureted water-gas or mixed gas), even under prevailing conditions, in the northern gas producing centers of California need not exceed the cost of oil-gas of the same heating value, with sized coal at $7.50 a ton delivered.

Costs Are Compared

Relative costs of oil-gas and carbureted water-gas for various costs of oil and coal generator fuel are shown in Figure 1.

This figure is based on the following assumptions:

	Per M. Cu. Ft.
Water-gas:	
Generator fuel, pounds of coal	35
Oil gallons	3.5
Labor, generator house expense	$0.05
Maintenance, works apparatus	0.01
Steam and power (steam at 60 cents per 100 pounds)	0.042
Miscellaneous expense	0.025
Credit tar at 3 cents per gallon	.015
Oil-gas:	
Oil, gallons	7.75
Labor	$0.05
Maintenance	0.01
Miscellaneous expense	0.035
Lampblack used as boiler fuel.	

Suggested Research

Unless a cheap means is discovered for removing the sulphur from high sulphur crude oils or from gas-oils, it will be necessary to use oils containing a high per cent of sulphur in the manufacture of gas in California. In order to use such oil successfully, it will be necessary to provide means for purifying the resulting gas, which will contain a troublesome amount of H_2S and organic sulphur. Whether the present process of liquid purification can be adapted to purify this gas, or a modified method developed, must be determined by research. An appreciable amount of the oil available in California—some of which is not being won at present—is high sulphur oil. Also much of the oil shale of California will yield oil high in sulphur, judging from the limited work done in this field of endeavor.

The solution of the purification problem will simultaneously make available for gas-making purposes the highest grade coal found in California, namely, the Monterey County coal, which contains too much sulphur for this use under present conditions.

Efficient operation of water-gas sets using bituminous coal is dependent upon the use of clean, screened coal in the generator. The best results will naturally be obtained with a coal which is not friable and does not disintegrate upon being heated. An attempt should be made, through a scientific study of generator design and fuels, to develop a generator in which other fuels can be gasified with equal efficiency.

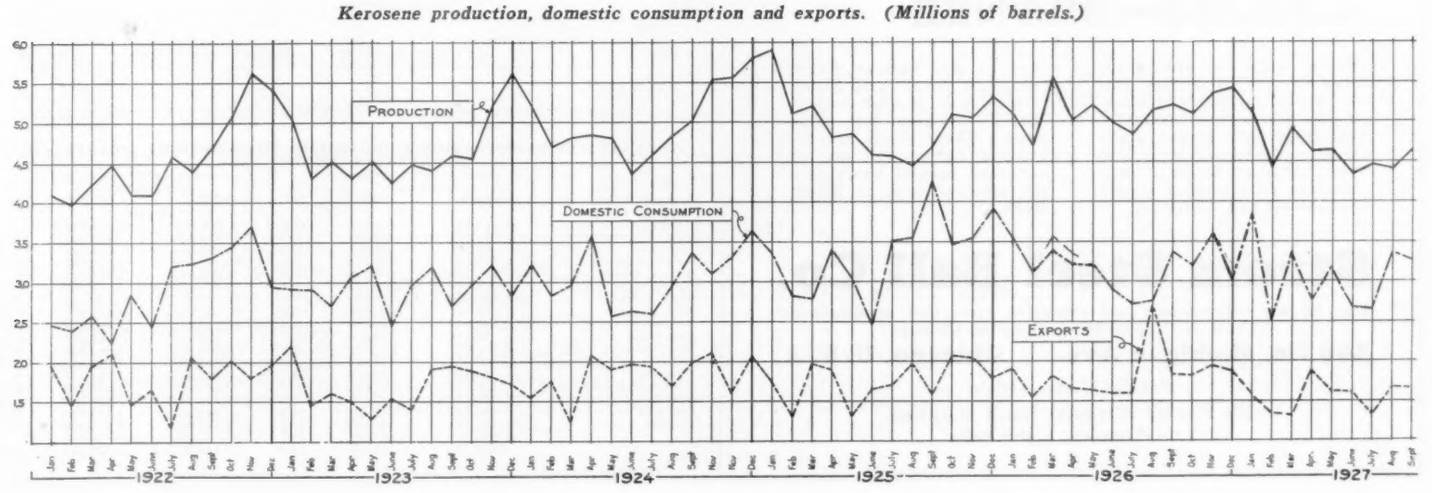
In the southern part of California, as the supply of natural gas decreases, natural gas will probably be used to enrich water-gas, and the methods of operating the water-gas sets to produce gas most economically will vary. A scheme of operating procedure can be and should be worked out for each particular set of conditions. Attention is called to the possibilities in operating with a prolonged blow-run making mixed gas containing water-gas, blow-run gas and natural gas. To a certain extent the results with varying operating methods can be computed, but economic conditions as well as the particular properties of the most available coal enter into the problem, and it appears that a series of tests with commercial size equipment on available coals would be a profitable investment at the present time. So far as the writer is aware, this method of producing mixed gas has never been attempted.

A similar result may be obtained by making an extended steam run of 5 to 20 minutes, admitting a controlled amount of air during the steam run and admixing the resulting gas with natural gas; adjusting the cycle and quality of air admitted per 1,000 feet of generated gas according to the available supply of natural gas, etc. An interesting series of experiments of this general character could be made at moderate cost, the gas produced being mixed with the main gas supply.

Assuming that oil will be used in the future as a gas enriching agent for manufactured gas rather than as the sole raw material, and realizing that under such conditions oil can be gasified more efficiently than in the oil-gas process, some thought might be given to the possibility of using the present oil-gas generating equipment in producing a very much richer gas for use as a carbureting material.

Anticipating the necessity or future desirability of using shale oil as a gas-enriching material, small scale cracking

Kerosene production, domestic consumption and exports. (Millions of barrels.)



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experiments probably would give some useful information. The results will probably vary widely according to the method of producing the oil, hence this factor must be correlated with the results of cracking tests. The relative values of California gas-oil and oil distilled from the so-called oil shale of California will then be better understood.

The possibilities of using petroleum carbon (coke), such as is produced in California by the most approved methods of refining oil, in the gas-making process, should be studied, and this study should be accompanied by laboratory experiments. The results of a brief examination of Dubbs still coke show the value of such fuel with respect to calorific value, sulphur content, and the nature and quantity of volatile matter. What is the best means of utilizing this fuel most effectively in the generation of gas? So far as the needs of the immediate future are concerned, the answer may be different for the different gas distributing centers.

Acknowledgments

Grateful acknowledgment for helpful suggestions is made to O. P. Hood of the Bureau of Mines, to engineers of the Seattle and California stations of the Bureau of Mines, to W. S. Yard of the Pacific Gas & Electric Co. and his engineers, and to Walter M. Berry, executive engineer of the Research Council.—Reports of Investigations, Bureau of Mines, Department of Commerce.

EMPIRE P. L. STATEMENT

The Empire Pipe Line Co.'s statement for October of runs, shipments and stocks for the month of October is as follows:

	Month Bbls.	Daily Av. Bbls.
Runs	1,473,318	47,526
Shipments	1,561,079	50,357
Stocks October 31	4,482,898	

Compared with its September business the October statement shows an increase of 422 bbls. a day in runs and an increase of 14,867 bbls. a day in deliveries (shipments) and a withdrawal from stocks of 87,760 bbls. of crude oil.

NO PECHELBRONN EXTENSION

A German agency states that the firm of Raky of Salzgitter, has tried to trace the continuation of the Pechelbronn structure under German soil with five deep boreholes. All these boreholes are without result. The drilling for oil near Aschaffenburg also are dry holes. There is therefore a fresh inclination towards the Hanover fields.

RECEIPTS OF CALIFORNIA OILS AND IMPORTS OF PETROLEUM

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the month of October totaled 3,155,000 bbls., a daily average of 101,774 bbls., compared with 3,465,000 bbls., a daily average of 115,500 bbls., for the month of September.

Receipts at Atlantic and Gulf Coast ports for the week ended November 5 totaled 556,000 bbls., a daily average of 79,429 bbls., against 889,000 bbls., a daily average of 127,000 bbls., for the week ended October 29.

	Total month October	Total month September	Week ended Nov. 5	Week ended Oct. 29
At Atlantic Coast ports:				
Baltimore	649,000	691,000	.....	170,000
Boston	135,000	209,000	.....	.....
New York	1,437,000	1,542,000	367,000	368,000
Philadelphia	438,000	437,000	119,000	246,000
Others	446,000	586,000	70,000	105,000
Total	3,155,000	3,465,000	556,000	889,000
Daily Average	101,774	115,500	79,429	127,000
At Gulf Coast ports				
Daily Average	.....	.....	.....	.....
Total Atlantic & Gulf Coast ports	3,155,000	3,465,000	556,000	889,000
Daily Average	101,774	115,500	79,429	127,000
Distribution of Total California Receipts Is as Follows:				
Crude	785,000	1,227,000	296,000	198,000
Gasoline	1,139,000	1,235,000	120,000	305,000
Gas Oil	311,000	372,000	70,000	78,000
Fuel Oils	862,000	631,000	70,000	250,000
Lubricants	58,000	.....	.....	58,000
Total	3,155,000	3,465,000	556,000	889,000

According to figures collected by the American Petroleum Institute, imports of crude and refined oils at the principal ports for the month of October totaled 5,582,000 barrels, a daily average of 180,064 barrels, compared with 6,184,000 barrels, a daily average of 206,133 barrels for the month of September.

Imports at the principal United States ports for the week ended November 5 totaled 1,454,000 barrels, a daily average of 207,714 barrels, compared with 1,692,000 barrels, a daily average of 241,715 barrels for the week ended October 29.

	Total month October	Total month September	Week ended Nov. 5	Week ended Oct. 29
At Atlantic Coast ports:				
Baltimore	808,000	841,000	197,000	296,000
Boston	406,000	343,000	143,000	125,000
New York	2,460,000	2,565,000	485,000	663,000
Philadelphia	119,000	384,000	152,000	64,000
Others	1,057,000	1,131,000	273,000	(a) 303,000
Total	4,850,000	5,264,000	1,250,000	1,451,000
Daily Average	156,451	175,467	178,571	207,286
At Gulf Coast ports				
Galveston District	50,000	170,000	.....	.....
New Orleans & Baton Rouge	599,000	642,000	204,000	216,000
Port Arthur & Sabine District	25,000	.....	.....	25,000
Tampa	58,000	108,000	.....	.....
Total	732,000	920,000	204,000	241,000
Daily Average	23,613	30,666	29,143	34,429
At all United States ports				
Total	5,582,000	6,184,000	1,454,000	1,692,000
Daily Average	180,064	206,133	207,714	241,715

(a) Revised.

MOTOR VEHICLE REGISTRATION AND GASOLINE CONSUMPTION—ATLANTIC COAST STATES—1925-1926

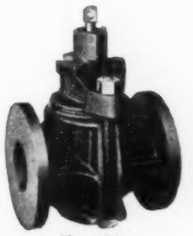
State—	Total motor vehicle registration 1925	1926	% Inc.	Gasoline consumption 1925	1926	% Inc.
				(barrels)		
Maine	140,499	151,486	7.8	1,363,969	1,479,838	8.5
New Hampshire	81,498	89,001	9.2	820,025	930,301	13.5
Vermont	69,576	74,063	6.4	615,790	658,444	6.9
Massachusetts	646,153	690,190	6.8	*8,000,000	*8,800,000	10.0
Rhode Island	101,756	110,746	8.8	1,305,933	1,497,677	14.7
Connecticut	250,669	263,235	5.0	2,910,245	3,201,633	10.0
New York	1,625,583	1,815,434	11.7	*21,000,000	*23,100,000	10.0
New Jersey	580,554	651,415	12.2	*6,300,000	*7,000,000	10.0
Pennsylvania	1,330,433	1,455,184	9.4	12,501,842	14,009,018	12.0
Delaware	40,140	44,834	11.7	426,692	475,367	11.4
Maryland	234,247	252,852	7.9	2,408,316	2,806,639	16.5
District of Columbia	103,082	111,497	8.2	1,067,343	1,214,417	13.8
Virginia	282,650	322,614	14.1	3,063,112	3,401,577	11.0
North Carolina	340,287	385,047	13.1	3,984,327	4,873,963	22.3
South Carolina	168,496	181,189	7.5	1,999,169	2,144,616	7.3
Georgia	248,093	277,468	12.3	3,304,813	3,704,813	12.1
Florida	286,388	401,562	40.2	4,715,059	6,829,922	44.8
Total	6,530,104	7,277,817	11.4	75,786,575	86,128,225	13.6

*Estimated.

For gas and gasoline lines

No. 962
Four-Way

For steam, air and water lines



No. 105
Flanged

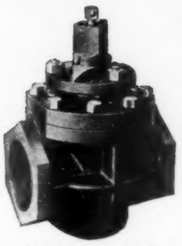
No. 157 Flanged

For oil, kerosene and naphtha lines

No. 922
Three-Way

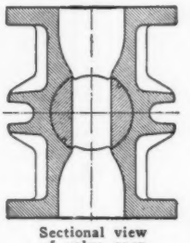
For vapor recovery and Foamite lines

For caustic, residuum and acid lines



No. 154 Screwed

For high or low temperature or pressure



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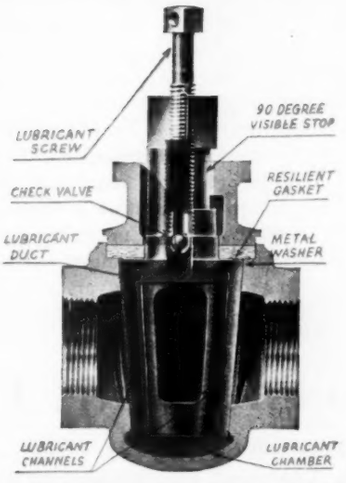

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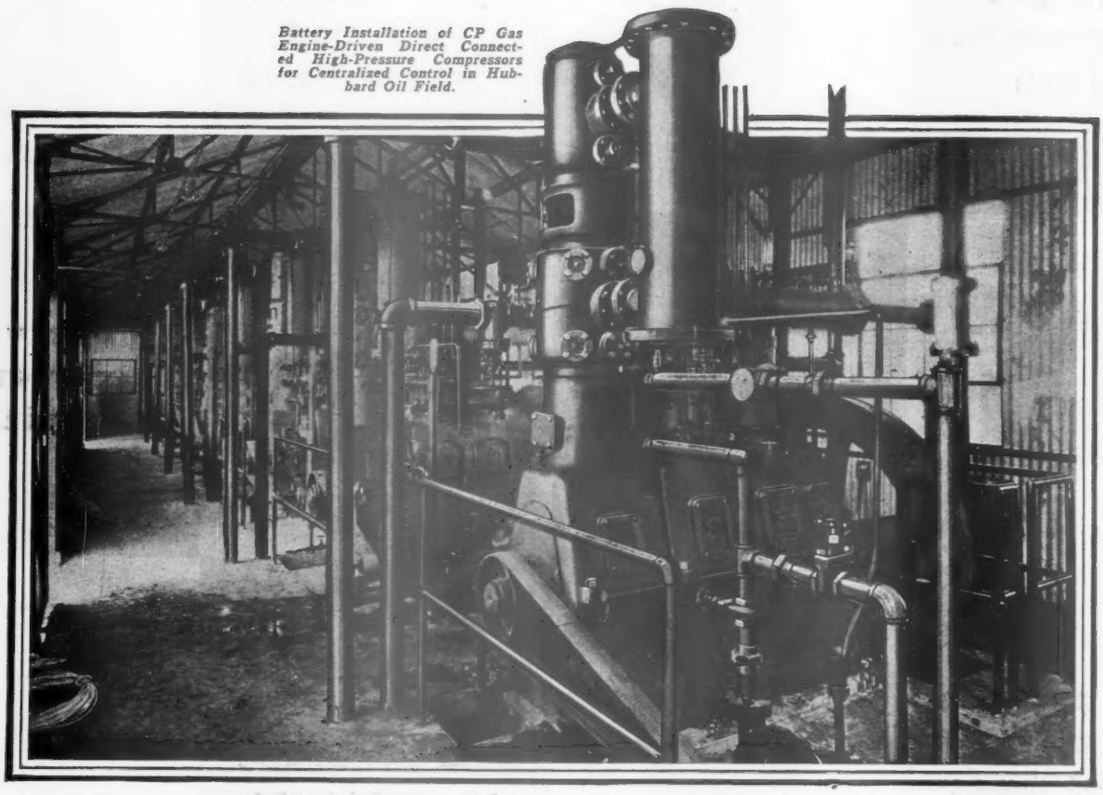

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Gas Compressors for pressure boosting
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VALUE OF PETROLEUM EXPORTS IN 1926 TOTALED $554,533,629

The gradual increase in the volume of exports of petroleum and its products from the United States continued over 1926 in comparison with the previous years and the United Kingdom retained its position as our best customer, taking 22 per cent of the total value of all petroleum exports, according to the figures just computed by the United States Bureau of Foreign and Domestic Commerce. France ranked second, but the value was less than one-half of that of the United Kingdom.

Total revenue from the exports of petroleum and its products amounted to $554,533,629 in 1926 of which $497,820,251 came from refined products. The only great importer of crude produced in the United States was Canada, which took 545,278,119 of the 647,053,881 gallons exported. The amount of the different products purchased by the various countries was in close proportion to the total of all products with the exception of China which imported 112,262,626 gallons of kerosene and took only 10,000,000 gallons less than the United Kingdom, the largest purchaser.

Of the lesser countries, Panama and Chile are relatively big purchasers of fuel oil and gas oil, the needs being high because of the large amount required by the marine.

Gasoline Leading Product

With gasoline as the major product from crude oil, it stands as the principal product exported also from a volume standpoint, but it does not compare with kerosene when the relative amounts produced from a barrel of crude oil are taken into consideration. The average yield of kerosene will approximate 7.5 per cent of the crude while the gasoline yielded will average close to 40 per cent of the crude. The volume of gasoline exported amounted to 1,784,154,802 gallons and the kerosene amounted to 924,680,979 gallons, showing that the refiners of the United States are having to meet stronger competition in gasoline sales than in kerosene. Foreign crudes in general will not produce as good quality kerosene as the crudes refined in the United States from the standpoint of its burning properties unless special treating is followed out which entails added costs. This is not so applicable to gasoline for the reason that the lighter product may be more easily treated.

Gasoline from South American refineries is working its way into the European market in competition with the gasoline shipped from the United States and over 1927 this factor is proving to be of increasing importance.

Table 1 details the amount of money spent by the 10 largest importers of petroleum and its products from the United States and clearly shows the important position the United Kingdom holds with respect to all other countries. Table 2 shows the volume of crude oil, gasoline, kerosene, gas oil and fuel oil and lubricating oil exported from the United States to the more important countries in 1926. It is interesting to note that practically all of the total is in the form of refined oils. Fuel oil and gas oil exports nearly equal the volume of gasoline exported.

Table 3 is a complete list of all countries importing petroleum products from the United States and shows the total value and volume imported in 1926.

Table 1—Value of Refined Petroleum Products and Crude Oil Exported From the United States in 1926.

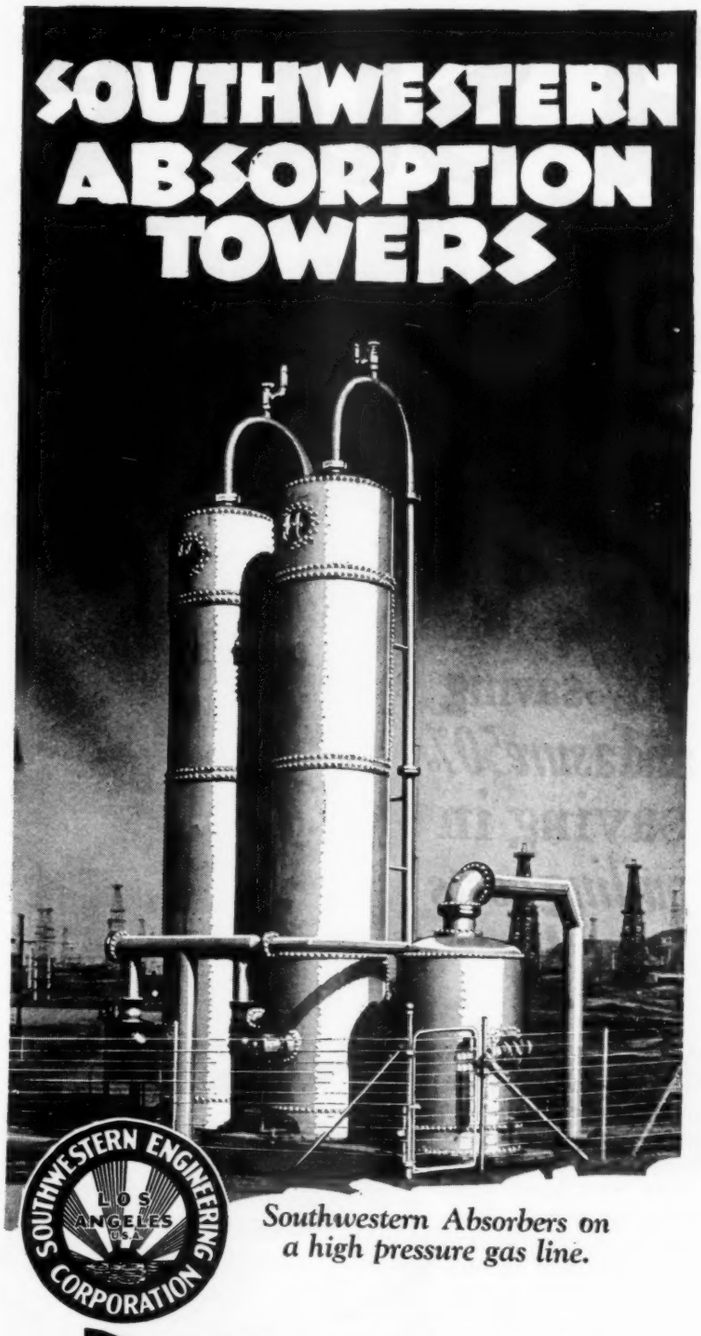
United Kingdom	$125,332,924
France	61,744,780
Canada	48,127,472
Australia	26,975,110
Japan	26,757,482
China	21,119,819
Germany	20,843,052
Netherlands	18,850,493
Italy	16,656,119
Brazil	16,559,919
All others	172,566,459
Total	$554,533,629

TABE 2
UNITED STATES EXPORTS OF PRINCIPAL PETROLEUM PRODUCTS IN 1926

Destination—	Crude Gallons	Gasoline Gallons	Kerosene Gallons	Gas and Fuel Oil Gallons	Lubricating Oil Gallons
United Kingdom	2,720,977	617,161,768	127,817,719	239,783,493	92,424,612
France	2,587,788	310,709,509	86,780,750	28,549,156	66,687,247
Netherlands	.....	71,753,862	74,022,706	22,422,677	7,841,582
Canada	545,278,119	110,406,247	9,030,765	176,988,336	12,788,718
Argentina	9,541,182	25,589,669	13,704,626	89,893,851	8,859,324
Chile	.....	3,066,769	172,296	182,631,255	2,249,558
Cuba	18,236,540	34,510,915	700,117	10,572,951	3,387,412
Panama	.....	7,054,661	2,227,708	214,451,719	430,542
Australia	31,890	81,328,823	24,002,372	103,812	15,069,336
China	.....	4,612,559	112,262,626	27,902,281	5,304,275
Japan	56,063,844	20,703,630	102,536,581	90,241,528	8,487,816
Other countries	12,593,541	494,356,389	371,422,723	366,147,335	165,642,355
Total	647,053,881	1,784,154,802	924,680,979	1,449,688,394	389,162,778

TABLE 3
TOTAL VALUE AND VOLUME OF PETROLEUM AND REFINED OIL EXPORTED FROM THE UNITED STATES TO OTHER COUNTRIES IN 1926.

Exported to—	Total Petroleum and Products Dollars	Petroleum Crude Gallons	Petroleum Crude Dollars	Total Refined Prods. Gallons	Total Refined Prods. Dollars
Austria	14,672	.....	.....	27,677	11,617
Azores, Madeira Islands	218,044	.....	.....	3,372,732	217,678
Belgium	13,612,355	1,488,193	121,413	117,136,772	12,841,939
Bulgaria	57,853	.....	.....	517,519	57,837
Czechoslovakia	84,663	.....	.....	163,431	81,832
Denmark	9,157,557	.....	.....	81,012,879	9,055,564
Estonia	7,009	.....	.....	.....	.....
Finland	1,132,829	1,250	80	8,756,884	1,101,702
France	61,744,780	2,587,788	181,764	492,877,667	60,997,792
Germany	20,843,052	735,899	42,887	164,274,402	18,932,287
Gibralter	147,837	.....	.....	2,431,045	147,552
Greece	352,839	.....	.....	1,202,394	273,048
Hungary	77,023	.....	.....	176,063	76,826
Iceland	5,661	.....	.....	9,367	4,323
Irish Free State	1,997,027	.....	.....	19,158,724	1,756,948
Italy	16,656,119	3,215,814	288,716	96,306,914	13,209,707
Latvia	1,433	.....	.....	4,618	1,433
Lithuania	16	.....	.....	60	16
Malta, Gozo, Cyprus Isls.	121,487	.....	.....	1,781,692	121,215
Netherlands	18,850,493	.....	.....	176,163,191	17,994,492
Norway	4,435,680	.....	.....	37,618,132	4,269,253
Poland and Danzig	76,201	.....	.....	183,961	76,011
Portugal	2,810,406	.....	.....	25,131,508	2,656,946
Rumania	88,645	.....	.....	244,059	85,527
Soviet Russia in Europe	14,815	.....	.....	3,510	1,440
Spain	8,344,261	1,590,496	98,459	59,571,650	7,167,983
Sweden	6,884,445	.....	.....	50,050,893	6,493,167
Switzerland	126,516	.....	.....	259,688	125,095
Turkey in Europe	199,324	.....	.....	829,507	134,037
United Kingdom	125,332,924	2,720,977	97,811	1,078,191,554	120,216,641
Yugoslavia and Albania	135,771	.....	.....	226,803	89,591
Canada	48,127,472	545,278,119	24,280,848	310,442,354	22,803,395
British Honduras	232,006	.....	.....	2,778,647	221,361
Costa Rica	278,840	.....	.....	440,062	115,239
Guatemala	279,417	.....	.....	507,858	140,790
Honduras	476,502	1,500	110	8,145,798	458,635
Nicaragua	352,878	.....	.....	5,885,999	341,194
Panama	6,977,942	.....	.....	224,427,126	6,952,608
Salvador	573,079	.....	.....	5,174,348	425,385
Greenland	1,540	.....	.....	24,447	1,540
Mexico	4,433,672	1,636,305	65,111	52,765,330	3,300,925
Miquelon and St. Pierre Islands	1,491	.....	.....	4,197	1,436
Newfoundland-Labrador	86,438	.....	.....	313,409	82,446



Southwestern Absorbers on a high pressure gas line.

POSITIVE contact of the gas and oil in counter current flow through the tower with the oil held at a constant level, assures efficient stripping of the gas.

Higher gas flows are possible without increased velocity. In addition to this large overload factor, there is the advantage of having no lower limit restriction to capacity, due to the fact that the gas orifices are always sealed by a body of oil. The result is a tower of great flexibility.

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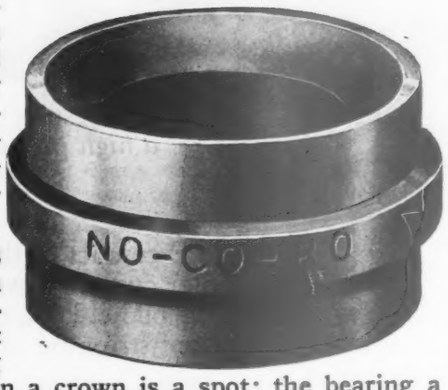
a sure chance for a possible 90% saving and a *sure* 50% saving in *pulling costs*!



While No-Co-Ro DROPS and seats are guaranteed to outwear and outperform the two best balls and seats you have ever used, in actual practice it is not uncommon for them to outperform *five* to *thirty-six* balls and seats.

No-Co-Ro DROPS and Seats embody a revolutionary principle of valve check design. The bearing of an ordinary ball in a crown is a spot; the bearing a DROP has is a line the full length of the drop—a line twice the diameter of the ball and seat.

Week after week the DROP falls smoothly into its seat, without rattle or flutter. Its No-Co-Ro alloy construction guarantees it against pitting and corrosion even in the severest conditions.

Users everywhere report service far beyond our guarantee. A Kansas Company (name on request) reports *thirty-six months'* service in a well which formerly required monthly replacements! On the basis of a possible 90% and a sure saving of 50%, may we add your name to our list of satisfied users?

Norris Brothers, Inc.

Robinson, Illinois -- Fort Worth, Texas

Exported to—	Total Petroleum and Products Dollars	Petroleum Crude Gallons	Petroleum Crude Dollars	Total Refined Prod. Gallons	Total Refined Prod. Dollars
Bermudas	141,176	.....	.....	699,858	138,970
Barbados	80,812	.....	.....	296,226	72,061
Jamaica	569,262	.....	.....	2,209,845	551,236
Trinidad and Tobago	144,563	.....	.....	1,133,782	135,910
Other British W. Indies	309,363	138,000	5,600	1,439,204	299,032
Cuba	7,222,687	18,236,540	1 177,197	49,427,711	5,672,824
Dominican Republic	1,422,972	1,353,527	48,798	12,489,238	1,329,528
Dutch West Indies	146,662	.....	.....	2,813,889	144,070
French West Indies	154,458	.....	.....	638,818	151,867
Haiti, Republic of	430,016	.....	.....	1,773,935	419,838
Virgin Islands of U. S.	124,728	.....	.....	2,076,481	123,789
Argentina	15,194,066	9,641,182	430,477	141,078,050	13,951,166
Bolivia	242,512	.....	.....	1,762,644	149,071
Brazil	16,559,919	.....	.....	105,334,673	16,230,828
Chile	6,157,550	.....	.....	188,344,620	5,531,324
Colombia	1,349,211	.....	.....	4,907,452	716,174
Ecuador	221,773	.....	.....	1,127,117	81,057
British Guiana	65,579	.....	.....	169,170	56,919
Dutch Guiana	93,321	.....	.....	405,634	90,833
French Guiana	35,710	.....	.....	159,621	35,665
Paraguay	21,467	.....	.....	52,230	19,549
Peru	826,776	.....	.....	1,343,908	450,071
Uruguay	6,068,524	.....	.....	57,132,377	5,928,789
Venezuela	820,693	.....	.....	1,813,360	645,852
Aden	66,652	.....	.....	389,932	66,546
Arabia and Hejaz	30,913	.....	.....	130,150	22,851
British India	9,458,865	.....	.....	89,585,386	9,133,792
British Malaya	1,267,843	.....	.....	5,883,175	1,196,022
Ceylon	331,221	.....	.....	1,380,174	277,226
China	21,119,819	.....	.....	150,109,769	18,787,085
Java and Madura	1,948,494	.....	.....	8,254,126	1,726,422
Other Dutch East Indies	1,634,368	2,233,356	106,350	10,740,619	1,521,436
French Indo-China	1,595,827	.....	.....	10,056,824	1,536,060
Hong Kong	2,684,219	.....	.....	23,769,592	2,341,651
Iraq	4,728	.....	.....	11,607	4,642
Japan	25,757,482	56,063,844	1,535,909	224,366,754	22,580,832
Kwantung, leased territory	2,072,629	.....	.....	11,300,381	1,920,636
Palestine	47,329	2,533	900	141,427	44,530
Persia	315	.....	.....	295	308
Philippine Islands	6,362,123	.....	.....	58,710,233	6,157,116
Siam	230,700	.....	.....	1,196,837	226,896
Soviet Russia in Asia	3,875	.....	.....	7,062	2,400
Syria	487,114	.....	.....	2,568,330	485,908
Turkey in Asia	26,279	.....	.....	109,835	25,750
Australia	26,975,110	31,890	8,009	120,822,237	26,078,137
British Oceania	646,133	.....	.....	2,964,511	642,599
French Oceania	196,222	.....	.....	923,367	196,167
New Zealand	12,698,616	189,168	4,504	90,491,399	12,479,462
Belgian Congo	707,903	.....	.....	8,196,068	702,489
British East Africa	1,122,541	.....	.....	6,482,887	1,099,570
British South Africa	9,422,424	.....	.....	39,016,548	8,981,863
British West Africa	3,364,510	.....	.....	16,143,026	3,339,327
Egypt	1,310,005	.....	.....	6,354,743	1,283,663
Algeria and Tunisia	2,498,348	.....	.....	28,445,110	2,493,953
Madagascar	268,933	.....	.....	1,313,431	267,530
Other French Africa	1,918,629	.....	.....	12,899,365	1,906,635
Italian Africa	750	.....	.....	2,040	750
Liberia	40,866	.....	.....	188,059	40,740
Morocco	821,387	.....	.....	4,975,769	782,826
Mozambique	2,314,565	.....	.....	8,246,512	2,161,016
Other Portuguese Africa	234,912	.....	.....	1,070,477	232,289
Canary Islands	827,528	7,500	830	3,199,680	817,544
Other Spanish Africa	286,233	.....	.....	1,748,802	284,605
Total	*554,533,629	647,053,881	28,495,773	4,559,411,366	497,820,251

ACQUISITION OF BERGIUS RIGHTS INCLUDES FUTURE DISCOVERIES

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 12.—A great deal has been said about the recent agreements for American rights with the I. G. Farbeindustrie A. G., by which the Standard Oil Co. of New Jersey will be able to control the United States territory in the use of the patents to the Bergius process relating to the hydrogenation and liquefaction of brown coal or lignite, but the interesting technical facts explaining just what this means, have not previously been made public.

In some quarters official announcements have been made respecting this agreement and all of them have for some reason studiously omitted the name of the Standard Oil Co. involved.

Even now the significance to the American public as a whole, of this acquisition, is not fully understood. It is in fact an achievement about which there should be no reason for any sort of secrecy, because eventually it will be known generally and it is entirely in the interest of future American consumers of important products involved.

The precise terms of this agreement are not fully available, but information in the hands of the writer throws much light on the importance of these exclusive rights to the Bergius patent which relate not only to the hydrogenation or liquefaction of brown coal, but include a share in the rights to the patents for their hydrogenation of black coal (steinkohlen dergin), although the foreign rights to the latter are controlled by a company known as the International Bergin Co., of The Hague, which has been organized especially for that purpose and in which the Royal Dutch-Shell group is interested.

Another interesting fact which has not been clearly stated is that the Standard Oil Co. of New Jersey and the Royal Dutch-Shell group, each possesses an interest in the Gasolin A. G., a German organization for the marketing of gasoline in Germany. The I. G. owns 50 per cent of the stock of the Gasolin A. G.

American Capital Available

American capital necessary for construction of the great coal liquefaction station at Merserburg has been made available. The American interests not only have acquired these valuable American rights, but are in a position to derive benefits from future discoveries in the field of coal liquefaction and oil technology which may be made by the I. G.

This agreement also includes arrangements concerning the sale of synthetic oil, whether produced by the liquefaction of coal or by the water-gas pressure catalyst method whenever production on a commercial scale may be undertaken.

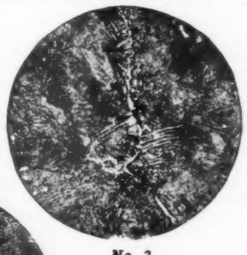
The processes of the I. G. for working heavy oils, hitherto difficult to make use of, are said to be valuable and to be a method for refining such oils under high pressure. In recent patents of the I. G. mention is made of new catalytic agents, for instance ammonia and ammonium sulphide or nitrides unaffected by water, such as silicon and titanium nitride. There is also a method by means of which 1 per cent of gaseous ammonia is added to the reducing gases which are usually hydrogen or hydrogen mixed with steam or carbon monoxide. In utilizing solid nitrogen compounds they are mixed with the coal.

Ammonia, it seems, may be produced by adding nitrogen to the hydrogen and using for a catalyst iron permeated with

Compare D+B Rod Stock

in the laboratory
in the field
under a microscope

Photograph No. 1, magnified one thousand times, and then reduced to one-third original size. D & B rod pin before treatment. Structure is "Ferrite" (light constituent) and "Pearlite" (dark laminated).



No. 2

No. 1

Photograph No. 2, magnified one thousand times, then reduced one-third original size. D & B Heatreat rod pin. The new structure has an ultimate strength of one hundred thousand pounds per square inch and greatly resists fatigue failure.

Examine the accompanying photomicrographs—note in No. 1, the two clearly defined constituents in the steel before the D & B Heat Treatment has changed the structure of the metal, and produced a tough, homogeneous steel of great ductility and strength, and increased the safe working stress approximately 200 per cent.

D & B Sucker Rods can be bent flat while cold without a sign of a crack, and have maximum resistance to fatigue, crystallization and other deteriorating influences in actual service.

Write for the new D & B bulletin on sucker rod service.

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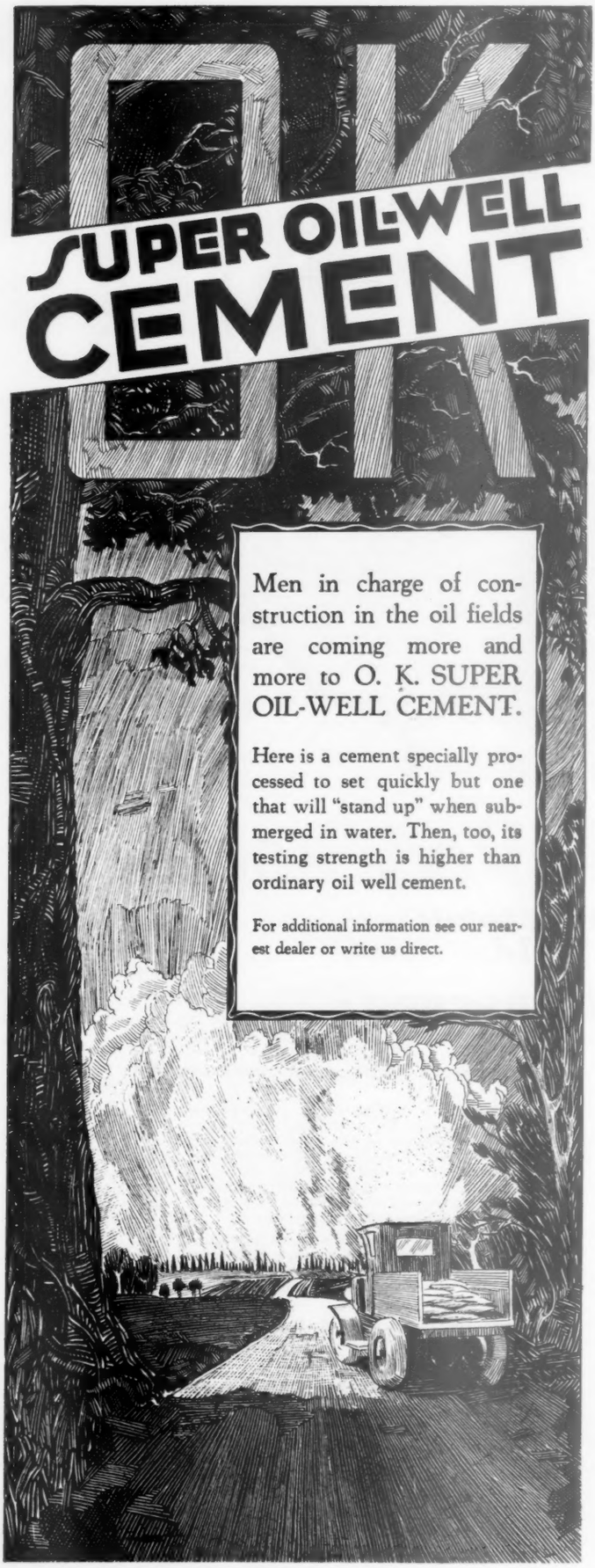
[illegible], TAFT, COALINGA, BAKERSFIELD, SIGNAL HILL, HUNTINGTON BEACH & SANTA FE SPRINGS, CALIFORNIA.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alkalis and alumina, activated barium compounds, etc. Other catalysts in hydrogenation are said to be compounds of molybdenum, such as sulphide, molybdic acid, ammonium molybdate, alone or mixed with iron, cobalt, alumina, or calcium carbonate and combined sulphur, particularly the sulphides of heavy metals, are mentioned. Similar claims are made in the realm of tars and other liquid materials derived from coal, lignite, peat, and wood, from which it is asserted that oils practically free from pitch and with a small content of phenol may be obtained. These new catalytic agents are reputed to be especially valuable in reducing the time necessary for the liquefaction of coal with a resultant saving in expense.

Pulverized Coal as Fuel

The I. G. is also known to be experimenting in the utilization of pulverized coal as a fuel for Diesel engines and to have made progress.

Some of the new cracking methods are said to yield readily such gases as ethylene, propylene and butylene, which are obviously of much interest to American industry. As far as ethylene is concerned, it is reported that the processes are carried on without such metals as free iron which facilitate the formation of carbon dioxide from carbon monoxide and steam. The actual cracking is effected, it seems, in an atmosphere of superheated steam.

An interesting feature of this international agreement is the fact that glycerin can find a substitute in ethylene glycol, which is a chemical product not only of national, but international importance. This substitute is playing a conspicuous part in industry today.

Chemists are aware of the change that took place when the I. G. introduced methnol for use where wood alcohol had been regarded as necessary. Now as is well known in chemical circles that have studied this agreement made between the important German Chemical Industry, known as the I. G., and the Standard Oil Co., glycol will be available through an American corporation. In chemical circles in New York City it is understood that the Union Carbide Co. is interested with the Standard in the production of glycol under the agreement with the German industry.

The I. G. is expected to produce glycol by a cracking process devoted to the oil which it is manufacturing from brown coal through a method upon the Bergius patents. Glycol must be produced from ethylene, but ethylene may be derived by cracking: (1) alcohol, (2) natural gas, (3) oil. Ethylene is then combined with chlorine to make ethylene chlorohydrin, which is hydrolized into glycol. The cost of chlorine is therefore an important consideration.

American Product Better

The Th. Goldschmidt A. G. is reported to manufacture glycol by means of ethylene obtained from coke oven gas, and is stated to have commenced production during the war as a substitute for glycerin. Its purity is said to compare unfavorably with the best American product.

The Th. Goldschmidt A. G. is believed to sell glycol to consumers at the present time for a price varying from 2 to 2½ marks per kilo, whereas American prices are alleged to be from 25 to 30 cents per pound f.a.s. New York. Eighteen months ago chlorine was selling in Germany for from 22 to 25 marks per 100 kilos, exclusive of containers, but export prices were probably higher owing to the necessity of more expensive containers. These prices have remained practically unchanged. Chlorine is made in Germany by the Chemische Fabrik Buckau and by the Gresheim Elektron plant of the I. G. Farbenindustrie A. G., as well as by several relatively small concerns.

A well-informed source expressed the opinion that ethylene chloride cannot be sold in Germany profitably at less than 22 cents per liter, although the large home demand has taken the greater part of American production and very little has been exported. The price of chlorine in Germany, according to the Chlorine Convention, is still 22 pfennigs per kilo, although it is possible that on very large orders a slightly lower price might be offered. The cost of containers for export, as previously noted, sometimes makes a difference in prices offered to foreign consumers.

Cheap Ethyl Alcohol

It is said that ethyl alcohol can be produced by the I. G. at as low as 4½ cents, American money, per liter, a liter being 2.11 pints. These figures are of particular interest in showing just what can be done by this German process, the manufacturing cost as given, of course, being the cost in Germany. As the German farmers convert their surplus potatoes into alcohol the I. G. has not been encouraged to extend its chief production of that article, but its potential efficiency to produce at such a low price will be noted with interest by American chemists.

It will also be noted that glycol is an antifreeze mixture as is glycerine which has come into such large use in refrigeration.

The use of glycol has also been taken up by other industries; for instance in the manufacture of dyes and colors, and as an agent in the printing, engraving, photographic, ceramic and metal working industries. Glycol is also being introduced in the medicinal and pharmaceutical industries, and is being mixed with a great many compounds used in the medical profession. It can also be used as an ether (aethyenglykolmonoathylather) or solvent in the manufacture of lacquers and other mixtures of a like nature. These developments are of great importance to Germany, in as much as the I. G. Farbenindustrie A. G. of Frankfort and Th. Goldschmidt A. G. of Essen are both engaged in the manufacture of glycol. Chlorine is a well-known agent in chemical warfare.

An important factor in the production of ethylene glycol is said to be the cost of electricity, and from that aspect the I. G. Farbenindustrie A. G. may said to be exceedingly well favored. Owing to its large reserves of brown coal the I. G. can produce its electric power at very low cost and it is learned from a reliable source that electric power at the foregoing plants is costing 1 pfennig per kilowatt hour.

AUSTRALIAN OIL SEARCH

Directors of the Roma Oil Corp. state that the reports from the company's field regarding the recent oil strike at Roma, Queensland, Australia, are highly satisfactory. Several flows of oil carrying high percentage motor spirit have occurred.

LEGAL

NOTICE OF RECEIVER'S SALE OF OIL AND GAS LEASE

Notice is hereby given that the undersigned Receiver will, under and by virtue of a certain judgment and decree of foreclosure made and entered by and in the District Court of Creek County, Oklahoma, in Cause No. 12673, wherein the Tulsa Rig, Reel & Manufacturing Company was plaintiff and Lawrence Anderson, Executor of the Estate of Clint Anderson, deceased, et al, were defendants and cross-petitioners, and by virtue of an order of sale issued out of said court and to me directed, on the 5th day of November, 1927, I will on the 10th day of December, 1927, at the hour of 10 o'clock A. M. offer for sale at public auction, at the North front door of the Courthouse in the City of Okmulgee, County of Okmulgee, Oklahoma, to the highest and best bidder for cash, free and clear of all liens and incumbrances, the following described property, towit:

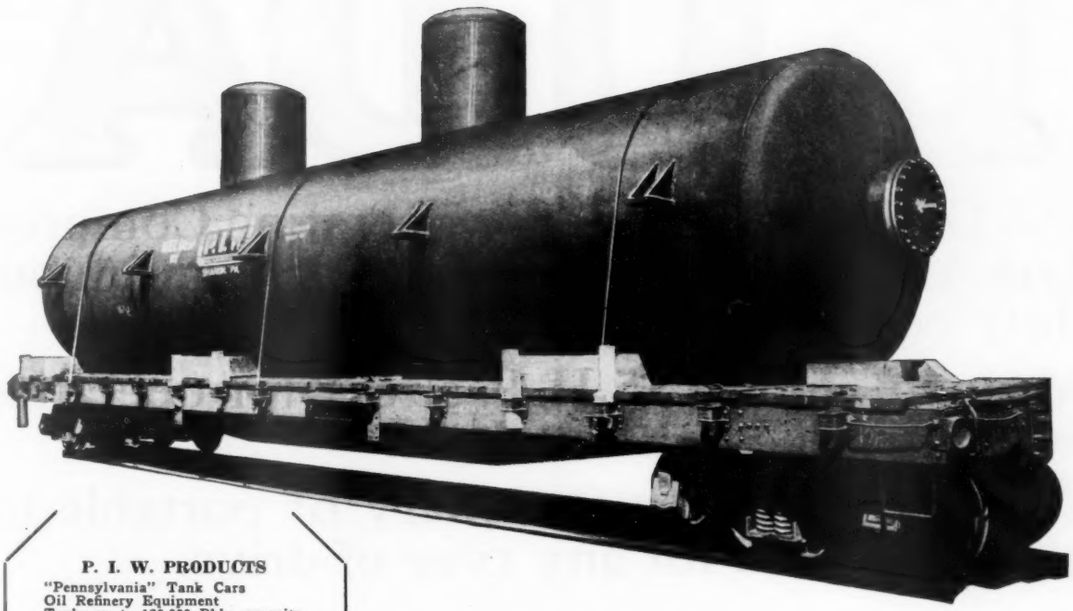
An oil and gas mining lease on and covering the Northeast quarter of the Southeast quarter of Section 22, Township 15 North, Range 11 East, Okmulgee County, Oklahoma,

known as the Tabor lease, together with all of the oil wells, oil well casing, tubing, rods, pumps, engines, boilers, power plants, rigs, derricks, machines, machinery, houses and equipment of every kind and character thereon and thereunto belonging.

Said sale will be made subject to confirmation by the District Court of Creek County, Oklahoma, and possession of said oil and gas mining lease, together with all of the appurtenances thereon and thereunto belonging, will be delivered to such purchaser immediately upon approval of said sale.

Full information concerning the five wells on said lease, the amount of production, material and equipment thereon may be had on application to the undersigned at his office in the city of Okmulgee, Oklahoma, or to Mosier & Mosier, Attorneys, Muskogee National Building, Muskogee, Oklahoma.

I. H. COX.
Receiver.



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Water Tanks
Penstocks
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Metal Ladles
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General Light and Heavy Steel Plate Construction
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P.I.W.
STEEL PLATE CONSTRUCTION

They Stand the Strains and Stresses

The remarkable fund of practical experience, gathered in all parts of the world over a period of more than 35 years, at the command of our engineers—men whose keen, analytical minds are schooled in the adaptation of engineering achievements to the needs of modern industry—is noticeably reflected in the P.I.W. welded pressure vessels for the oil industry cracking processes.

These huge vessels are constructed to cope with extreme pressures continuously sustained, and to withstand the strains and stresses to which they are subjected during long periods of service. Special attention is given to the weld which, obviously, must fuse properly and form a perfect bond with the shell.

P.I.W. welded pressure vessels are made with wall thicknesses up to 3½", and even heavier. They are limited in their size only by transportation restrictions.

The resourcefulness of the engineers who are responsible for these vessels can solve your particular problem. Write us without obligation.

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Adapted to either stationary or portable installations and for any type of drive.

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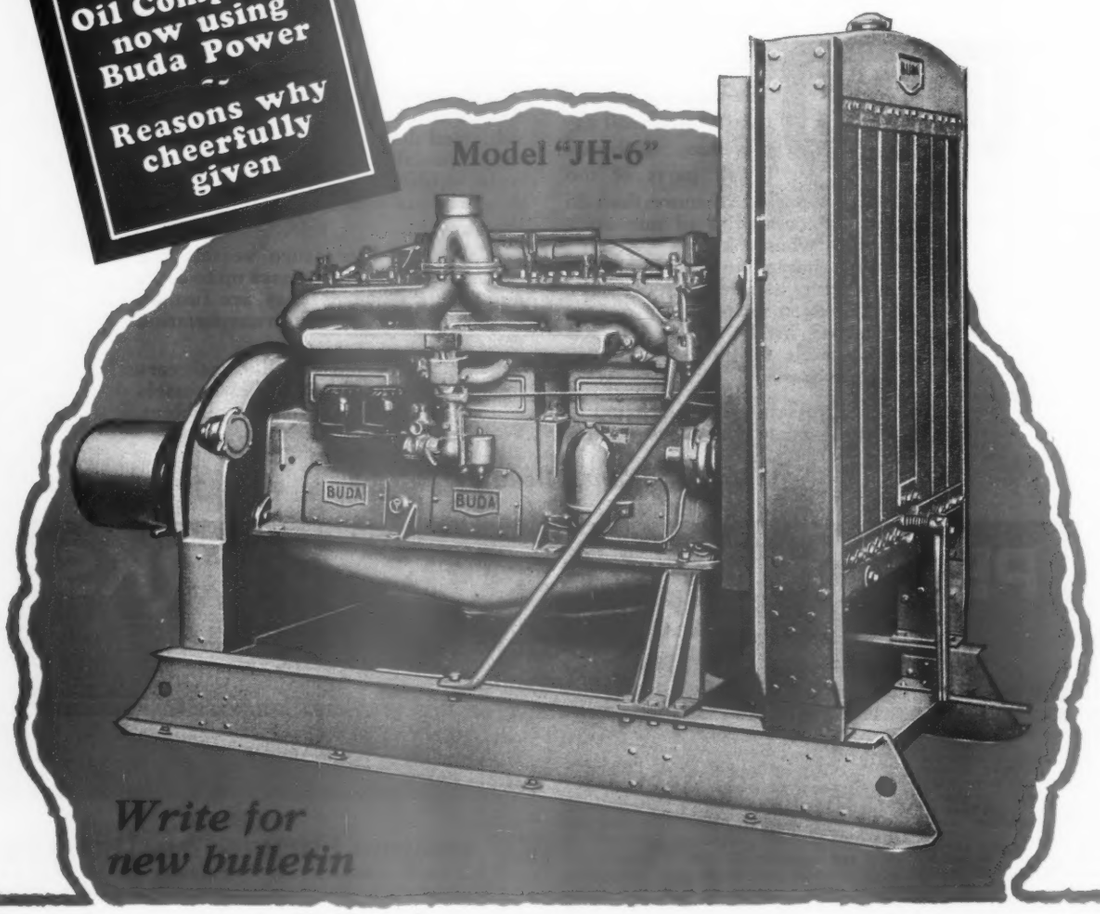

Write for new bulletin

SOUTHWEST TEXAS

(Continued from Page 57)

showing 250,000 feet of gas and spraying oil, with the amount of oil increasing.

Carolina-Texas Field

Houston Oil Co.'s No. 3 S. Benavides, Survey 683, located 350 feet to north line and 1,470 feet to east line, is drilling at 2,100 feet.

Cole Gas Field No. 2

Cole Petroleum Co.'s No. 36 Benavides, Survey 412, Block 14, located 159 feet to east line and 266 feet to north line, is drilling at 5,280 feet in sticky shale.

Mirando Valley Pool—Zapata

Ed Mims and San Evans' No. 1 Hinnant, Survey 10, Block 9, located 150 feet to southeast lines and northwest lines, has derrick up. O. W. Killam's No. 2 (5) Hinnant, Survey 74, located 1,980 feet to west line and 2,500 feet to south line, at approximate depth of 1,700 feet, is testing sand at 1,480-98 feet, which showed gas and has set casing and ready to drill out plugs.

Luling Field—Caldwell

Magnolia Petroleum Co.'s No. 19 Rios, J. Henry Survey, NE cor., is drilling at 650 feet; No. 6 Branyon, James Berry Survey, 425 feet northeast of No. 5, is drilling at 2,142 feet. North & South's No. 1 Kelly is drilling at 7,230 feet in schist; No. 2 Tiller is also in schist at 6,780 feet.

Adams Gas Field—Medina

Southern Gas Utilities, Inc.'s, No. 3 Schmidt, Survey 71, located 1,447 feet to west and 1,340 feet to south line, is location. Mid-Kansas Oil & Gas Co.'s No. 2 Nixon, Survey 13¾, located 597 feet to north and south lines and 500 feet to east lines, is rigging up. Witherspoon Oil Co.'s No. 6 Nixon, Survey 119, located 2,750 feet to north line, is location. Western Gas & Fuel-Witherspoon's No. 3 Adams, Block 7, is preparing to spud in.

Refugio Gas Field—Refugio

Coast Gas Co.'s No. 2 Shelly is being deepened to new 3,300-foot sand after producing gas from shallower sands. Houston Oil Co.'s No. 2-A Rooke is drilling. Houston Gulf Gas Co.'s No. 3 W. Heard is drilling.

Kingsville Field—Kleberg

Humble Oil & Refining Co.'s No. 4 Kleberg, Section 40, Block 6, took core at 3,144 feet showing odor of oil; No. 2 Sexauer, Section 41, Block 11, is drilling at 3,270 feet.

Dale Field—Caldwell

The Texas Company's No. 2 Lackey, Nich Kelly Survey, is rigged up; No. 3 Beatty, Nich Kelly Survey, has derrick up; No. 4 Lackey, Nich Kelly Survey, is drilling at 500 feet; No. 4 Clingensmith, Squire Damon Survey, has set surface casing and is drilling at 400 feet; No. 5 Clingensmith, same survey, is drilling at 1,200 feet; No. 6 Clingensmith, same survey, is drilling at 1,400 feet; No. 7 Clingensmith, same survey, has derrick up.

SOUTHWEST WILDCATS

(Continued from Page 57)

prove his belief. It was located on that side because surface conditions on the Texas side were not such as to permit of getting close to the river and these exposures. Geologists have not generally shared Boicourt's idea and he has invited everyone to check up his Mexican well as he drills it. His 20 tests on the Texas side were mainly shallow and were formation tests.

The Mexican Government's No. 1 Ferronales in Porcion 31, Camargo district, 14 miles south of Roma, Tex., is setting another string of casing. At 3,604 feet for a time it looked like a well, but more recently oil men from the Texas side who have been over there and seen it are not putting much hope in it. The well had a good showing of oil and is important for its bearing on things in Starr County on the Texas side of the river.

The Ohio-Mexico Oil Corp. is setting casing in its No. 1 San Marcos, 40 miles south of Cuatro Cienegas, Coahuila, on the big Cardenas estate lands. The No. 1 Zambrano, 30 miles west of Del Rio, is drilling at about 2,050 feet.

Brooks County

The Texas Company's No. 3 Lasater, Survey 329, located 2,380 feet to north line and 450 feet to west line, is drilling at 4,405 feet.

Duval County

Schlessinger Oil Corp.'s No. 1-A Moody, Survey 60, located 155 feet to north line and 1,650 feet to east line, at 2,396-2,401 feet, is drilling out plugs. National Oil Co.'s No. 1 Ball, Survey 16, located 450 feet to north and 150 feet to east lines, has derrick up and is building road to location.

Hidalgo County

Queen City Oil & Gas Co.'s No. 1 Adams, Lot 1, Block 82, 3 miles north of Mercedes, is fishing at 2,120 feet.

Jim Hogg County

Paesano Oil Syndicate's No. 1 Campbell, Las Vivortias grant, is drilling at 2,300 feet. O. W. Killam's No. 1 Canales, Baluarto grant, is drilling at 2,300 feet. T. G. Shaw's No. 1 Jones, Survey 381, Block 22, located 300 feet to south and 300 feet to west lines, is rigging up. Holden and others' No. 3 Jones, Share 27, Block 136, is standing at 2,548 feet.

Starr County

Clark & Woodruff's (formerly Woodruff and others') No. 1 Kelsey, Porcion 76, is standing at 200 feet. J. E. Harston's No. 1 H. Guerra, Survey 43, located 660 feet to south and 1,320 feet to east line, is at 300 feet waiting on fuel oil. T. W. Foltz and others' No. 1, Survey 301, located 150 feet to northwest lines, and 2,400 feet to west line, has rigged up.

Zapata County

Henne, Winch & Fariss' No. 1 A. Martinez, Survey 120, located 1,391 feet to east line and 2,025 feet to south line, is drilling at 1,174 feet.

Bexar County

Allen Burnam's No. 1 Ward, A. A. Gardiner Survey, southwest of Martinez, is shut down at 318 feet.

Bastrop County

Noack & Laning's No. 1 E. Boemer, Isaac Casner League, 150 feet to NE cor., has been spudded in. Fred Adams' No. 1 E. E. Roberts, J. B. Blalock Survey, 1,426 feet to northwest and 150 feet to northeast lines, at 2,345 feet, is in top of Edwards.

Bee County

D. Hewitt's No. 1 Ray, G. A. Ray Survey, is shut down at 2,247 feet. Nichols & White's No. 1 Hicks, Block 19, NW cor., is shut down at 1,408 feet. Red Ant Oil & Gas Co.'s No. 1 Perry & Chesnut, B. Q. Hadley Survey, 450 feet to east line and 1,600 feet to south line of farm, is drilling at 805 feet.

Blanco County

C. W. Bates' No. 1 is preparing to make location 8 miles east of Blanco City. Miller Creek Leasing Corp.'s No. 1 Glasscock, Survey 50, is to spud in soon.

Caldwell County

Bauchman and others' (formerly Buchanan and others') No. 1 Page, Dorothy Benton Survey, 1,200 feet to west line of Page tract, is shut down at 1,000 feet. Detex Oil Co.'s No. 1 Hardeman, 4 miles north of Luling, is shut down at 3,075 feet. Martin & Wright's No. 1 Blackwell, 1 mile east of Burdette Wells, is shut down at 26 feet. Ratcliffe's No. 1 J. L. New, James Hindes Survey, 150 feet to west line and 600 feet to south line, is shut down at 2,914 feet in Edwards lime.

DeWitt County

Empire Southern Oil Co.'s No. 2 Smith, Survey 3, located three-quarters of a mile west of No. 1, at 2,960 feet, is resetting liner and is showing a little gas and some oil, but sands up. McNeil & Matthews' No. 1 Toland, A. Dillard Survey, 150 feet to north and 300 feet to east line, is drilling at 600 feet. Williams & Gates' No. 1 Gohmert, G. W. Brooks League, 175 feet to north and 300 feet to east line, is shut down at 760 feet and well is to be taken over by other interests.

Gonzales County

L. L. Jones' No. 1 Campbell, Moore & Bridges Survey, SW cor., at 1,733 feet cored gray sand with some gas, with gas in breaks in lime since 1,543 feet. L. P. Unkel's No. 1 Hampton (No. 3 Johnson),

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C. H. Jaeger Survey, 240 feet to southwest and 120 feet to southeast lines, is drilling at 900 feet. H. B. Wets, trustee's, No. 2 Preston, W. W. Pace One-Third League, P. R. Whitemey Survey, is drilling at 700 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, located 700 feet to north line and 2,000 feet to east line, is drilling at 4,202 feet in hard rock.

Frio County

Lain & Brown's No. 1 Edwards, Hooper & Wade Survey, 920 feet to CNL, is drilling at 1,040 feet. P. A. Neilan's No. 2 Blackaller, James Gouley Survey, is drilling and has topped the chalk.

Goliad County

C. W. Simpson's No. 1 Ideus, W. H. Pendleton Survey, 156 feet to north line and 540 feet to west line of lease, is drilling in gumbo at 1,982 feet with test at 1,903-10 feet testing water and little gas.

Guadalupe County

F. A. Lain's No. 1 Weinert, W. K. Estell Survey, 150 feet to CNL, is standing at 3,004 feet and having trouble to get water to drill with. Eugent Sight's No. 1 Fred Kruger, Isaac Baker Survey, 450 feet to north and west lines, has derrick up and part of rig on ground.

Hays County

J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, is drilling at 2,068 feet in hard rock.

Kerr County

Walker-Van Duyn's No. 1 Barfield, B. B. Peck Survey, 4,700 feet to north line and 450 feet to east line, is preparing to spud in.

Kinney County

Havelin Oil Co.'s No. 1 Weatherby, Section 26, Block 5, is drilling at 4,372 feet in sandy lime. Stephens and others' No. 1 Clamp, Survey 346, is standing at 1,010 feet and showing little gas.

Live Oak County

Houston Oil Co.'s No. 20 Cartwright, M. Trudo Survey, SE cor., is drilling in hard shale at 1,113 feet; No. 21 Cartwright, J. M. Colchado Survey, 2,900 feet northeast of No. 18, has been spudded in. Encino Oil Co.'s No. 1 Stewart, Ezzo McWhorter Survey, 500 feet south of Largarto Creek and 500 feet west of Nueces River, is drilling at 870 feet. Morgan-Roxana's No. 1 West estate, L. A. Fant Survey No. 2, located 1,300 feet to southwest and 900 feet to northeast lines, is shut down at 2,207 feet for orders, with very slight show of gas at 1,761 feet. Roy Shipman's No. 1 W. W. Kolb, Tract 2,420, Block 44 of Simmons Subdivision, has set casing at 1,299 feet. Simmons Oil Co.'s No. 3 Reagan is fishing; No. 2 Griff has been spudded in; No. 4 Sartin is shut down at 2,303 feet.

Medina County

F. Banderet's No. 1 Mofield, Survey 532, located 550 varas to east line and 950 varas to north line, has derrick up and rig on ground.

Maverick County

Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, is drilling at 2,410 feet. Rycade Oil Corp.'s No. 1 Chittim, Section 129, Block 7, is able to get returns again at 4,295 feet; No. 2 Chittim, Section 158, Block 7, is drilling at 1,625 feet; No. 2 Sullivan is sidetracking at 5,132 feet.

Milam County

R. Von Gonton's No. 1 Von Gonton fee, M. J. Delgado Survey, 150 feet to west line and 180 feet to south line, has been spudded in. J. W. Kemp's No. 1 Jacob, J. Leal Survey, 150 feet to CWL, and 8 miles south of Cameron, is showing oil, and effort is being made to complete well; may set packer to cut mud; location is being made for No. 2 Jacob, one location away.

San Patricio County

Houston Oil Co.'s No. 1 Baldwin, Roos Survey, Block 5, located 250 feet to west line and 200 feet to south line, on test showed gas with rock pressure of 750 pounds and is being completed; No. 1 Humble is ready to drill in; No. 2-A Sun, Block 8, located 646 feet to west and 843 feet to south line, on test showed gas with rock pressure of 600 pounds and is being completed; No. 3 Humble, Block 7, at 200 feet to north and 250 feet to east line, has derrick up. Mission Drilling Co.'s No. 1 Harwood is drilling at 2,800 feet; No. 1 Hunter is rigging up; No. 3 Cage is location. National Oil Co.'s No. 1 Sullivan, J. C. McMullen Survey, 500 feet to SW cor., is shut down at 1,135 feet for fuel. George B. Pickett's No. 1 Garrett is drilling at 3,010 feet; No. 1 Whitworth is drilling at 200 feet in the Coleman Fulton Pastore Co. Survey. Sexat Oil Co.'s No. 12 Rachel is drilling in at 2,312-16 feet; No. 9 Rachel is drilling at 1,450 feet; No. 1 Hunter is location in the C. P. Rachel Survey, 150 feet to north and 811 feet to east lines. John Sigmund's No. 9 Robinson is drilling.

Travis County

Roy Clark and others' No. 1 Carl Jacobson, C. Harrison Survey, 500 feet to east line of farm, is drilling at 150 feet. T. P. Garrett's No. 1 Rowe, R. Hornsby Survey, is location 900 feet to north and east lines.

Uvalde County

Pure Oil Co.'s No. 1 J. D. Smythe, Survey 687, located 740 feet to north and 146 feet to east lines of Survey 20, has derrick up and is laying water lines.

Val Verde County

Crusoe Williams' No. 1 Holman, Section 5, is shut down at 2,940 feet for casing. Douglas Oil Co.'s No. 1 Sellers, Section 82, is drilling at 4,087 feet in sandy lime. East Del Rio Oil Co.'s No. 1 Russell, Section 183, is standing at 3,210 feet. Independent Operators' No. 1 Whitehead, SE SE Section 30, Block 4, is shut down at 3,925 feet. Magnolia Petroleum Co.'s No. 1 Whitehead, Survey 81, is drilling at 4,675 feet in black shale. O. O. Owens and others' No. 1 Mills, Section 128, Block 1, is drilling at 2,700 feet (corrected depth.)

Zavalla County

J. G. Pundt's No. 1 West, Fuentes Survey, NW cor., is drilling at 1,100 feet. Western Gas & Fuel Co.'s No. 1 West is drilling at 400 feet.

CALIFORNIA FIELDS

(Continued from Page 64)

erable number of new locations and upper zone producers available for deep drilling and although this concern is only running two strings of tools at present it will undoubtedly capitalize on its favorable holdings if possible. Colonel Foster, who was placed in charge of field development by Receivers Scott and Carnahan, will undoubtedly recommend an immediate enlargement of present work. The future policy is dependent almost entirely upon the ability of those directing the company to interest sufficient capital to permit a resumption of work on a substantial scale.

The past week witnessed the completion of two more large deep sand flowing wells in the Long Beach Field and several additional completions will be finished within 30 days. E. B. Campbell has brought in his No. 1 Long Beach at 6,010 feet and, while the production test has not yet been concluded, the well is flowing at the rate of approximately 4,000 bbls. daily and may do even better than this after it gets under way. The output of this new well, which is incidentally the deepest and first commercial producer in the Long Beach Field to get production below the 6,000-foot level, has not yet cleaned up entirely but is expected to do so shortly. No. 3 Chainey of the Pan American came in early in the week flowing 3,450 bbls. of clean 29.7 gravity oil daily and 1,500,000 feet of wet gas from 5,521 feet. The Pan American has another potential deep sand producer in No. 3 Anderson and this well should be tanking oil within two or three weeks. Doyle & Clune will probably undertake some corrective measures to remedy the water condition which is present in their No. 2 Long Beach, a recent completion doing 3,500 bbls. per day from the 5,725-foot level. Present production is cutting approximately 35 per cent water but this trouble is due to a mechanical error in setting the water string too high. The 6¼-inch was landed and cemented in this hole at 5,005 feet, at least 100 feet too high, and steps will undoubtedly be taken to case off this in-

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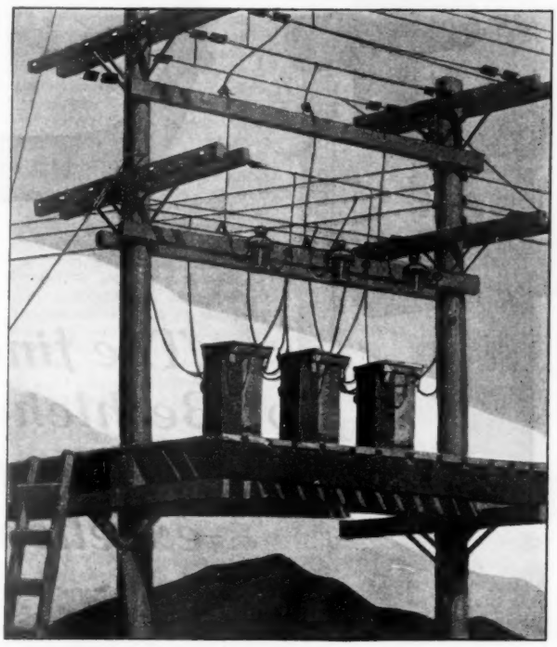

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termediate water, in which event clean production can be anticipated. No. 1 on the same lease was recently taken off production preparatory to being carried down to the deep sand. A check of drilling operations throughout the field indicates the probability of several other early deep sand completions within 30 days. The Union, which has heretofore limited its development work to the upper sand, should complete No. 13 Long Beach Community in the deep horizon within two or three weeks and this well should be followed into production by No. 12, which is being rigged up for deepening operations at 3,695 feet. Two new rigs, Nos. 16 and 17, are in course of construction on the same property and both will be spudded in soon.

Seacliff

Development work in the recently discovered field at Seacliff in Ventura County is going ahead by leaps and bounds and, in view of the fact that wells in this field can be finished from spud to completion in about six weeks, this new area will show a rather favorable production shortly after the first of the year. Seventeen locations have already been staked since the Pan American proved up this area for commercial production and at least 13 of these are situated in practically proven area. The Chanslor-Canfield Midway Oil Co. is putting the finishing touches on two new derricks and foundations were recently poured for three more. The Pan American has two rigs going up and material is being hauled in for an additional three. The General Petroleum has started construction work on two rigs and will begin taking form within a few days. At least one well should be spudded in by each of these three operators within 10 days and drilling operations will be pushed ahead as fast as possible as this entire group are first line offsets. Northwest of the Pan American's discovery well the Associated and Shell have mapped one location each on the Dunshee and Bailord properties and, while material is not yet on ground, construction work is expected to start in the very near future. Southeast of the discovery the California Petroleum has staked a new well but this location is not as favorably situated with respect to structure as the work undertaken by other companies.

With the axis of the Seacliff anticline running in a northwest-southeast direction a considerable portion of the productive acreage will be located out in the open ocean beyond the high tide line. A considerable number of drilling permits have been issued authorizing ocean drilling and as soon as their legal status has been ascertained several new wells will get under way. Seacliff will probably be one of the most interesting fields opened up in California and while it will not be the only district where producing wells will be located out in the open ocean it will be the first case of where wells have gone to any considerable depth. The old wells at Summerland in Santa Barbara County, practically all of which are located out in the open ocean, are shallow producers, the average depth running around 1,000 feet compared with a possible 3,000-foot average at Seacliff. It may be possible in the course of time that some ocean drilling will also be undertaken in the town lot area at Huntington Beach, but up to the present this work has been prevented because of the red tape involved. The Huntington Beach town lot area which lies adjacent to the coast line is known to extend out into the Pacific Ocean and is actually proven up for production if permission could be secured to go ahead. The attorney general has ruled, however, that the state of California cannot legally issue a permit within 1 mile of the outer limits of any incorporated city. This decision prevents the issuance of a valid permit at Huntington Beach as the productive area is within the corporate limits of that municipality. The condition at Seacliff in Ventura County presents a different situation as that field is about 6 miles removed from the city of Ventura.

New Deep Sand at Seal Beach

The development in the Seal Beach Field during the past week was the discovery of a new possible deep zone in the town lot area at Alamitos Heights. No definite data is available, however, as to whether a break was found below the Wahl zone nor has the actual depth of the well which encountered this new horizon been announced. The Superior's No. 1 Kinkle was the instrumentality through which this new sand was found and while the fact that the well did not show any prolific tendencies tends to confirm the opinion of many that the latest deep sand will not prove commercially productive, its potentiality is still undetermined. No. 1 Kinkle made some oil and gas on a recent production test in the deep zone which is reported to be at approximately 5,900 feet but the failure to secure a big well does not mean that the latest find will not prove commercially productive. It is very possible there is an intermediate water between the Wahl and Kinkle horizons which the Superior did not case off and this would account for the reported 25 per cent cut shown in the initial production. Those in close touch with developments at Seal Beach are not making any attempt to minimize the possibility of a deep production zone below the Wahl horizon as there is ample geological evidence to support the existence of deeper production. In the east end of the Seal Beach Field the Associated found an oil sand around 5,800 feet several weeks ago and it is logical to assume that a similar condition may exist in the Alamitos Heights town lot area. The Long Beach Field, which lies just northwest of Alamitos Heights, has a deep sand at 6,000 feet and if the formations in these two fields can be correlated there should be a similar zone at Seal Beach and also at Alamitos Heights. The new find of the Superior warrants the maintenance of a very minute watch over developments at Alamitos Heights in the immediate future for if the Kinkle horizon is proven productive another major deepening campaign will be undertaken with the result that field production will mount accordingly. The fact that the Superior is not releasing any information is a practical admission that something of importance has been encountered.

Huntington Beach

There were no new wells finished in the Huntington Beach Field during the past week, although James, Price & Richards' No. 3 Huntington was given a pumping test in the shallow tar zone at 2,214 feet and made about 40 bbls. of 16.1 gravity oil which showed a cut of about 20 per cent. The decline in drilling operations in the town lot area is naturally being reflected in a smaller number of completions and since new wells will therefore become more infrequent daily production will continue until the Standard begins drilling up its reserve acreage on the A and B leases in the older sections. None of the wells out around the edge of the Huntington Beach Field showed any improvement, although Leo Stein's No. 1 Long, northwest of the California Petroleum's Buck property in the extreme northern part of the old field, has logged a few minor indications and still has a chance of securing production although it is not located any too favorably. The Buck property of the California Petroleum Corp. is generally regarded as the northern limits of production at Huntington Beach and this opinion is confirmed by the fact that No. 1 Buck had shown evidence of edgewater. The California Petroleum is incidentally starting a new well on this lease which will be designated as No. 8 Buck. E. J. Miley failed to find any evidence of commercial production in the Calnan Petroleum Co.'s so-called five points well after carrying it down to 5,107 feet and he is returning it to the latter concern. This well, which is still further north than Leo Stein's No. 1 Long, will probably be considered as a satisfactory test of the area northeast of the old field. The possibility of an extension in the southern part of the Huntington Beach Field was given a severe setback as a result of the recent abandonment of the Petroleum Securities Co.'s No. 1 Mills, which was located out in the mud flats. The failure to find any evidence of structure at this point

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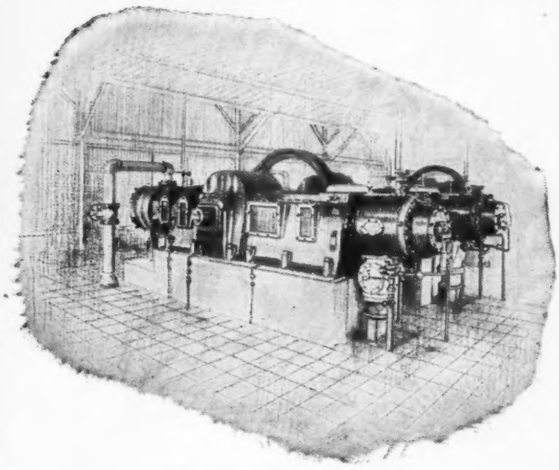

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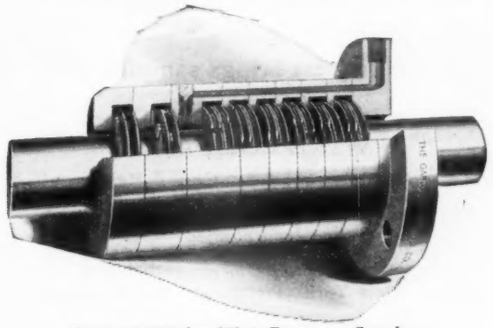

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prompted the Petroleum Securities to swing still further south and a well was subsequently located up on the mesa in the Fairview area of the old Newport Field.

Richfield-Brea Olinda

The General Petroleum Corp. finished two new wells in the Richfield district during the past week and while one, No. 2 Mullen, was not actually turned loose, it should be on regular production within a few days. The company's actual completion was No. 1 Atwood, the initial completion on this property, which started off doing 135 bbls. daily from 4,448 feet. The General Petroleum has another potential producer, No. 1 Stern, nearing completion in this field and it should be finished next week. Featherstone & Preston are also making preparations to finish a new well in this field, although the outlook at 4,429 feet indicates that only small production may be anticipated. A check of field operations under way indicates the probable completion of at least 10 wells in the Richfield district during the next 30 days and the spudding in of about five new projects in the same period. The Petroleum Securities finished No. 1 Wright in the east Coyote Field early in the week but it was a rather small pumper which showed 105 bbls. daily from 4,150 feet. The output secured was rather disappointing and, while lease requirements call for additional work, the company will probably not undertake anything more than is absolutely necessary to actually hold the lease until conditions improve. The Holly Development Co. put No. 1 Barnett on a pumping test after plugging back from 4,512 feet to 2,595 feet but the best the well would do was 50 bbls. The Union has decided to make a production test of No. 3 Olinda in the Brea Olinda Field before resuming drilling at 5,324 feet and the 10-inch is therefore being perforated at 2,535 feet where a rather favorable oil sand was encountered. The company's development program also calls for a new well in this area and rig construction has already started on No. 71 Stearns.

Kern River

Three new wells were put on production along the Kern River front and drilling operations indicate the probable completion of several more during the next 21 days. The best well finished was George F. Getty's No. 1 Grady in Section 26-28-27, which started off doing 315 bbls. daily from 2,113 feet. This new well is the first of nine projects which the Getty interests will drill on the 40-acre Grady lease. Stakes have already been driven for two new wells and both should be spudded in before the close of the month. The General Petroleum's No. 14 Sill was also a satisfactory completion as it registered an initial of 290 bbls. of 16.1 gravity oil daily from 2,254 feet. The Associated put No. 25 in Section 23-28-27, on a pumping test and it showed an initial of 242 bbls. daily from the 2,290-foot level. A check of present drilling operations reveals that two wells should be completed in this area within 10 days. The Petroleum Securities and Chanslor-Canfield Midway Oil Co. should each list a new well and it is probably the St. Helens Petroleum will also bring in another, No. 2, along about the same time. The first well which the St. Helens finished last month in Section 26-28-27, averaged 550 bbls. during October.

Northern California Wildcats

Wildcatting activities in Southern Kern County should determine the potentiality of several areas within 30 days and as several of the localities being tested look rather promising it is possible another field may be opened up. The Union Avenue area at Bakersfield in Kern County has been temporarily sidetracked because of the delay in making a satisfactory production test on the Pacific Eastern's wildcat in that section but this section has not yet had a conclusive test under favorable conditions. This company is not overlooking any bets, however, and that it is absolutely sold on the possibility of securing commercial production is evidenced by the fact that its agents have been consistently tying up any loose acreage available. The Pacific Eastern recently exercised several options west of its Union Avenue wildcat paying a total of $160,000 for fee title to three additional parcels of potential oil land. The company's latest acquisitions cover the 60-acre Pasquini tract for a consideration of $75,000, the 20-acre farm of A. Consani for $45,000 and the 20-acre farm of Pietri Pieri for a consideration of $40,000. This is at the rate of $1,600 per acre or several times the actual land value for agricultural purposes. L. S. Barnes, discoverer of the Round Mountain Field northeast of Bakersfield, has stepped into the area immediately south of Bakersfield and has staked a location in Section 11-30-27, near the Stine School. Barnes has also leased 40 acres of potential oil land just west of the Pacific Eastern's wildcat.

Southern California Wildcats

One of the most important developments among Southern California wildcatters was the location of a new well to be drilled at Sunset Beach by the Olympic Refining Co. This new well, which will be located south and west of a duster drilled by the General Petroleum, is situated in a town lot area midway between the Seal Beach and Huntington Beach Fields where there is a possibility of a small productive area being opened up. The most interesting feature in connection with this well is the fact that the General Petroleum, Marland, Union, California Petroleum and several others have recognized this as a productive interval but have refused to drill because of the town lot area. The Hawthorne-Lawndale district failed to show any substantial change for the better during the week and the outlook is not any too promising although the Shell is reported to be considering the advisability of taking over the Dupree wildcat recently quit-claimed by J. E. O'Donnell. The San Clemente Oil Co.'s No. 1 Peck also in this area failed to find the sand encountered by the Smith Petroleum Co.'s wildcat, although it is not yet out of the running.

The Hurst Oil Corp.'s No. 1 Simons at Inglewood has been showing surface indications for some time and, while no substantial oil sand has been encountered, there is a good possibility of developing commercial production. The Monterey Park Petroleum Co.'s wildcat at Monterey Park has been going through an extremely hard formation recently but this conglomerate will probably disappear soon. The Standard was considering the advisability of abandoning work at Olive a week or so ago when a core sample showed a granitic formation, but a survey indicated this was probably an intrusive granite and drilling has consequently been resumed. The Associated is making good progress in its No. 1 Patterson, a wildcat near Pico, and unless mechanical trouble develops the company will determine the potentialities of this area within 60 days. The discovery well at Potrero, No. 1 Cypress failed to hold up satisfactory due to water trouble and a none too thick oil horizon and the company resumed drilling in search of a lower sand. The bit is going ahead at 4,820 feet, at which depth the predominating formation is a brown shale. E. E. Carpenter has taken over the old Julian Petroleum's test a few hundred feet away from the Associated's No. 1 Cypress and the abandoned test will be re-entered and another 1,000 feet of hole added. Drilling will be resumed at 5,280 feet if everything goes along well.

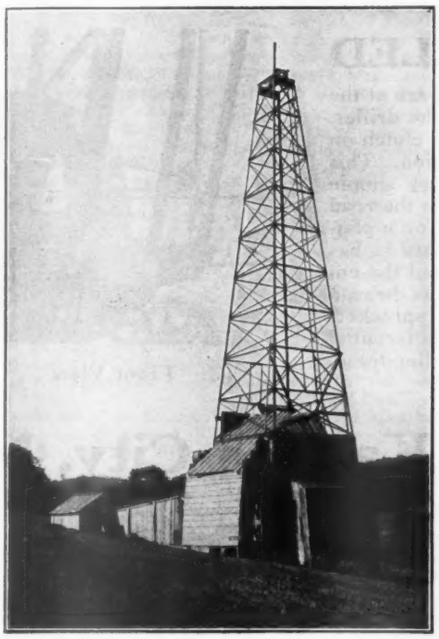
CANADIAN FIELDS

(Continued from Page 63)

tool outfit the drillers have had to straighten considerable crooked hole, while drilling conditions in the hard Kootenay sands are reported worse even than in the Turner Valley wells.

Turner Valley

In the Turner Valley Field Dalhousie Oil Co.'s No. 5, LSD 16, Section 30-19-2w5, which got a good light crude production at 4,525 feet, is being deepened. At 4,575 feet the drill is reported still in the oil sand. The oil is being swabbed every other day, but no information is being given out as to the indicated pro-



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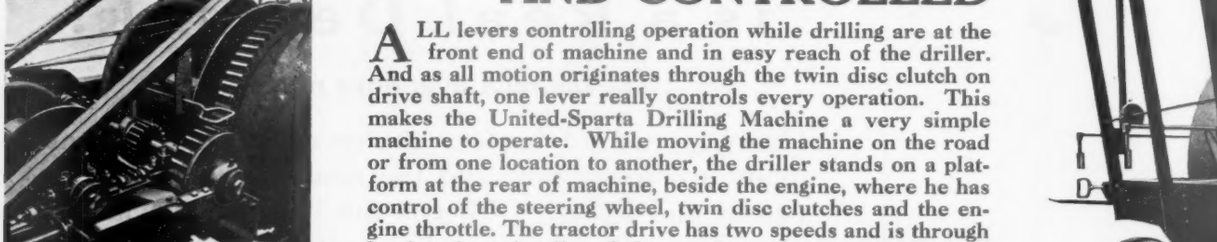

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duction. Dalhousie Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, has been cemented in the top of the limestone at 4,357 feet. Dalhousie's No. 6, LSD 10, Section 13-20-3w5, is reported drilling around 4,520 feet.

Royalite Oil Co.'s No. 10, SE Section 12-20-3w5, has spudded in. It will be drilled throughout with cable tools. Royalite Oil Co.'s No. 6, LSD 16, Section 31-19-2w5, after being cemented at 3,114 feet, is reported to have resumed drilling with a rotary outfit. Royalite's No. 7, LSD 3, Section 13-20-3w5, has been delayed by the diamond drill bit sticking in the hole, but is again reported drilling around 4,170 feet. Royalite's No. 9, LSD 6, Section 13-20-3w5, which changed to rotary at 504 feet, has resumed drilling. Royalite's No. 8, LSD 9, Section 12-20-3w5, is at 2,270 feet and drilling.

Home Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, which recently resumed work, is reported at 3,025 feet and drilling. Home Oil Co.'s No. 3 has been located in the same LSD, about 600 feet southeast of No. 2; work on the cellar is now under way.

In the north end of the Turner Valley, Foothills Oil & Gas Co.'s No. 1, SW Section 26-20-3w5, is reported drilling below 3,340 feet.

Imperial-Home Contracts

Following an arrangement made some weeks ago, the formal contracts with Imperial Oil, Ltd., for drilling operations and the handling of production on all the Home Oil Co. leases were signed at Vancouver, B. C., on October 31, and have been forwarded to the Imperial Oil, Ltd., head office at Toronto. Under the agreement Imperial Oil, Ltd., takes over the drilling and producing operations of the Home Oil Co. The latter retains full control of its stock, and will get the entire benefit from the production of Home No. 1 and No. 2 wells, the former with an estimated potential production from the Fernie shale horizon of 100 bbls., partly light crude oil and partly a potential crude naphtha recovery from wet gas. Pipe lines have already been laid by Imperial Oil, Ltd., from Home No. 1 to the Royalite Oil Co. gasoline absorption plant, from which point the production will be piped to the Imperial Oil, Ltd., refinery at Calgary. The contract calls for bona fide developed by Imperial Oil, Ltd., of all the Home Oil Co. leases. Since the agreement was signed, Imperial Oil, Ltd., has already started the deepening of Home Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, and has also started work on Home Oil Co.'s No. 3 in the same LSD. Dr. O. B. Hopkins, chief geologist of Imperial Oil, Ltd., has arrived in Calgary to locate Home's No. 4, which will probably start drilling this season. The Imperial Oil, Ltd., program for the development of the Home acreage will provide a further test of the light crude production encountered by Home No. 1 and Dalhousie No. 5 in the Fernie shales. The showings in these two wells indicate the possibility that the south end of the Turner Valley, where the Home acreage is located, may develop a big production in this horizon, which was not commercially productive in the central portion of the Turner Valley Field, where production is chiefly from the deeper Madison limestone.

Illinois-Alberta Oil & Refining Co.'s No. 1, LSD 14, Section 12-20-3w5, reported a crude naphtha production of 691.2 bbls. for the week ending October 30. Illinois-Alberta's No. 2, same LSD, is reported drilling around 600 feet.

McLeod Oil Co.'s No. 3, LSD 16, Section 1-20-3w5, is again on the pump and making around 40 bbls. a day of light crude from the Dakota sand at 3,200 feet. McLeod's No. 1, same LSD, is drilling at 3,010 feet.

Okalta Oils' No. 1, LSD 1, Section 1-20-3w5, which has a show of light crude at 4,120 feet depth, is continuing its bailing test which has lowered the level from 2,000 to 1,300 feet. No further estimate of the production, originally placed at 25 bbls. a day, has been given out pending completion of the test.

Still Fishing

Vulcan Oils' No. 1, LSD 11, Section 13-20-3w5, which is temporarily frozen and out of production, is fishing for the tools lost when the well was brought in about a year ago. Vulcan's No. 2, same LSD, is at 3,850 feet and shut down pending completion of the fishing job at No. 1. Spooner Oils' No. 1, LSD 12, Section 13-20-3w5, has cemented the 6¾-inch casing at the top of the Madison limestone at 4,690 feet, after encountering a small wet gas flow, estimated at 250,000 feet a day.

New McDougall-Segur Oil Co.'s No. 2, LSD 14, Section 12-20-3w5, which has an estimated production of 80 bbls. a day of light crude from the Dakota sand at 2,646 feet, is installing a pump. Material is being moved in for No. 3, which has been located in the same LSD. This test will probably spud in about the end of November as a further test of the Dakota sand.

Seneca Oils, LSD 1, Section 34-20-3w5, is reported at 3,180 feet, with the 10-inch casing down to 3,017 feet, and cementing a caving at the bottom of the hole. Calmont Oils, LSD 2, Section 1-20-3w5, is at 4,175 feet with 8¼-inch casing run to 3,970 feet. A new 6,000-foot cable is being installed, after which underreaming and running casing will be resumed. British Dominion Oil Corp., LSD 4, Section 5-20-2w5, is at 6,020 feet and drilling.

Sisterville Oil Co., organized largely by Saskatchewan men, has secured financial support in Montreal for a test in the Turner Valley Field. No location has yet been made. The company has also some 40 acres in the potential field near Riverhurst, Saskatchewan, where the Riverhurst Oil & Gas Co. has a test in LSD 4, Section 33-22-7w3, shut down at 518 feet.

Moose Mountain

In the Moose Mountain district, Signal Hill Oil Co.'s No. 2, LSD 9, Section 34-23-5w5, is reported drilling at 1,495 feet with casing at 1,471 feet. Some light oil seepages are reported.

On the Morley Indian Reserve, Gold Coin Oils is reported drilling at 3,905 feet with a small gas production continuing.

In the DeWinton district, Anglesey-Lakeview's No. 1, LSD 1, Section 22-21-1w5, is reported at 1,540 feet and drilling, with considerable open hole which is standing up well.

The Oil Producers Corp. of Canada has a derrick up in LSD 4, Section 24-22-23w4, in the Gleichen district, and is installing machinery. The test may spud in early in December. It is partly financed by Gleichen capital. The same company has four outfits at work in the Montana field for itself or other companies, and is starting work with a fifth string of tools. In the Bannatyne Field in Montana it has spudded in a test for the Bannatyne Oil Co. In the Sweetgrass Hills area it has completed four gassers with a reported aggregate production of 40,000,000 feet a day for a syndicate headed by Charles A. Brown and J. F. Paterson, and is spudding in No. 5 well for the same interests, which are piping the gas to Great Falls. The Oil Producers Corp. is rigging up for its own No. 3 test in SE Section 18-34-1w, on the Barnhill lease, offsetting the Dakota-Montana producer. The company is also skidding a rig to SW of Section 29-35-3w, for a new test for the Mill City Oils, Ltd.

In the Irma-Wainwright Field, east central Alberta, Interior Oil Co., Section 36-44-7w4, is reported drilling close to the oil sand at 2,010 feet. British-Wainwright's No. 1, LSD 4, Section 22-45-6w4, has cemented casing on top of the sand at 2,222 feet and is temporarily shut down waiting for the cement to harden. Mid-Canada Oils, Section 35-45-6w4, is resuming after a shut down at around 200 feet owing to difficulty in securing water to run the rotary outfit.

The Maple Leaf Oil Co., operating in the Irma-Wainwright Field, held its annual meeting at Wainwright recently, when the following directors were elected for the ensuing year: James Black, T. J. Cosene, J. C. C. Bremner, B. Haddock, H. G. Morris, Robert Allan, George Lake. The company has a good gas production from No. 1 well in Section 19-

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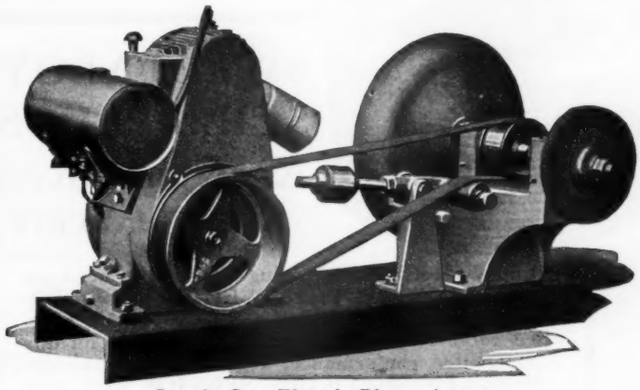

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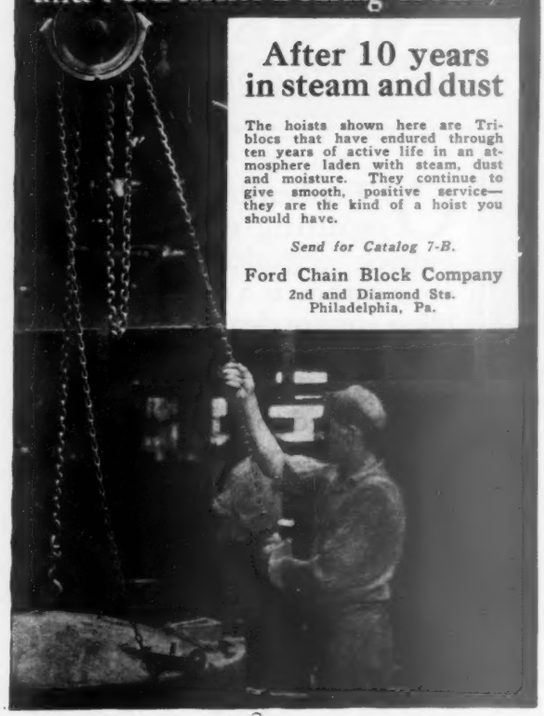

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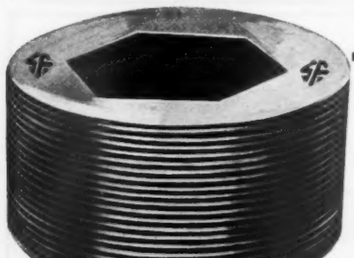

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45-8w4, and has for about a year been supplying gas to the town of Wainwright.

Border Fields

In the border fields, southern Alberta, Gas Production & Transportation's No. 1, NE Section 21-4-18w4, near Warner is reported cementing 15½-inch casing at 867 feet. A fair production of shallow gas is supplying fuel for drilling and camp purposes.

In the Skiff Field, Devenish Petroleum's No. 1, LSD 5, Section 27-5-14w4, is around 3,200 feet and running double tour, after a couple of months' delay due to casing trouble. The test is expected to get the top of the Madison limestone around 3,400 feet or less, within which depth additional production is looked for. Following the deepening of No. 1 well to this point, Imperial Oil, Ltd., will proceed with a development program on the Devenish leases. It is reported that No. 2 test will be drilled a little west of No. 1.

In the Pincher Creek district, southwestern Alberta, Mount Royal Oil & Gas Co.'s No. 1, LSD 4, Section 7-6-1w5, is reported drilling around 600 feet, with increasing gas pressure as the well is deepend. The well has more than sufficient gas to operate the plant. The gas production is apparently from the Dakota sandstone. The Mill Creek anticline, on which the test is located, is a small foothill structure where a production similar in character to that of the Turner Valley Field is looked for at about 2,000 feet less depth. Henry L. Doherty & Co. of New York are reported to be starting preliminary work on their holdings of approximately 50,000 acres a little to the south of the Mill Creek structure.

In the Cypress Hills area south of Medicine Hat, Eagle Butte Oil Co., LSD 3, Section 31-7-4w4, is below 645 feet. Some delay was occasioned by the difficulty of hauling the 16½-inch casing over the heavy roads. The 20-inch casing was set at 241 feet, and a 20-inch hole carried down to 645 feet, where the 15½-inch casing is being run. The drillers are planning to carry the 15½-inch ultimately to 1,200 feet.

Southern Alberta

Operations in the southern Albert areas have drawn attention to the old Beaver Oil Co. well, drilled close to the Alberta-Montana boundary in the latter stages of the Calgary boom of 1914. The Beaver location was about 7 miles northeast of the Rogers-Imperial gasser in LSD 9, Section 29-1-11w4. A rotary outfit was used. The rotary drill passed through a 45-foot sand with pronounced traces of oil, and at 1,850 feet a gas production, estimated as high as 20,000,000 feet a day, was claimed. The abandoned hole is still showing oil and gas along with the water. A Calgary syndicate is planning to start a test next spring close to the old Beaver well.

In Ontario, a test for water on the James Daly farm on Wolfe Island, near Kingston, got a fair production of surface gas at 50 feet depth. The production is reported large enough to be utilized for adjacent buildings. The area is considered outside the field of large commercial gas production.

In the old Tilbury Field, Kent County, Ontario, Union Natural Gas Co.'s No. 276, Radmor farm, Romney Township, is reported drilling around 300 feet. Union's No. 277, Nick Baldwin farm, Romney Township, is at approximately the same depth, and drilling.

In Dawn Township, Lambton County, Union Natural Gas Co.'s No. 19, a little west of Union's No. 1 McDermid farm, is drilling around 700 feet.

In Dover Township, Kent County, the Ajax Oil & Gas Co.'s deep test on the Gilbert Reaume farm, close to the Union Natural Gas Co.'s No. 1 discovery well, is reported to have spudded in. This is a test of the Trenton limestone.

GULF COAST FIELDS

(Continued from Page 61)

has made a location for No. 1 Carter. Porter and associates' No. 4 Austin, a mile south of Crockett, still is shut down at 3,950 feet.

Jasper County

Raymond and associates' No. 1 Kountze, 16 miles northwest of Jasper, is drilling gumbo and shale at 3,218 feet.

Jefferson County

Gulf Production Co. got two producers in Jefferson County, one, the No. 11-A Marrs-McLean, flowing 770 bbls. of oil and 230 bbls. of water and sediment from a total depth of 5,400 feet. The other is a 15-bbl. pumper, the No. 227 Gladys. Production in the latter is shallow, coming from a sand at 825 feet. No other wells were completed in the county.

Gulf's No. 10 Marrs-McLean is drilling around 4,830 feet, and No. 6 Jack & Duff below 3,050 feet. Magnolia Petroleum Co.'s No. 2-A fee is drilling below 5,760 feet, and its No. 7 fee below 3,715 feet. Beaumont Oil & Prospecting Co. is coring at 3,338 feet in No. 1 Tyrell, 3 miles northwest of Beaumont. J. O. Davis & Kinnear's No. 1 Gladys, Spindletop, is drilling below 5,575 feet. Turnbow's No. 2 Banks, Spindletop, has been abandoned temporarily with the drill stem stuck at 4,250 feet.

Freeport Sulphur Co.'s No. 3 Staiti, Big Hill, is drilling shale below 360 feet. This company also has spudded No. 4 Staiti. Gulf Production Co.'s No. 4 Bordages, Fannette district, encountered a water sand at 3,025 feet. Jim McMurray's No. 1 Crosby, 5 miles northeast of Port Arthur, is drilling shale at 4,015 feet. Port Arthur Oil & Gas Co.'s No. 4 West, at Westburry, is shut down at 2,830 feet. South Spindletop Oil & Development Co.'s No. 1 Young, a mile west of Nederland, is in gumbo at 2,508 feet. Sun Oil Co.'s No. 6 McLean is drilling below 6,045 feet. No. 16 McLean is down 4,675 feet, and No. 17 at 4,300 feet.

Liberty County

Two pumpers were completed in Liberty County, both in the Hull Field. Republic Production Co.'s No. 43 Dolbear is making 75 bbls. daily, 15 per cent water, from sand at 2,520 feet, and The Texas Company's No. 4 Hannah fee is producing 100 bbls. daily, 35 per cent water and sediment, from a depth of 3,482 feet. Empire Gas & Fuel Co. also has a test in the Hull district which it will put on the pump. This is No. 27 Barngrover, which is in a sand at 3,125 feet. Republic Production Co.'s No. 49 Dolbear is drilling below 1,000 feet and No. 89 Dolbear below 2,950 feet. Gulf Production Co.'s No. 87 Phoenix at Hull is drilling at 4,050 feet, and No. 1 Phoenix at 1,425 feet.

Barlow and associates' No. 1 Minchcliff, 2 miles northeast of Cleveland, is drilling gumbo and shale at 2,215 feet. Navarro Oil Co.'s No. 3 Harrison is drilling deeper at 3,290 feet. The Texas Company is drilling gumbo at 1,889 feet in No. 1 Harvard, Davis Hill. Miller and associates are shut down temporarily at 1,831 feet in No. 1 Barker, Boling Field.

Matagorda County

John Deering and associates are building a derrick for No. 1 Caney Cattle & Pasture Co. A gasoline rig already is on the location. Rycade Oil Corp. and Humble Oil & Refining Co.'s No. 5 Kountze is drilling at 3,247 feet. Valley Oil Co.'s No. 1 Hudson, Markham, is drilling at 2,630 feet.

Montgomery County

Brains and associates' No. A-1 Fitch, 3 miles from Spring, is in a hard, blue, sandy shale at 3,350 feet. Johnson-Hardy's No. 1 Hardy, 4 miles south of Conroe, is drilling gumbo below 600 feet.

Orange County

Gulf Production Co.'s No. 19 Lee Hager, deepened to 4,203 feet, is pumping 48 bbls. of oil daily. This company's No. 3 Hager & Moore, an old well drilling deeper, is down below 3,600 feet. Gulf Coast Oil Corp.'s No. 5 Leon is drilling below 3,340 feet. This is another old well being deepened as is Rycade Oil Corp.'s No. 13-E State, which is drilling below 2,450 feet. Sinclair Oil & Gas Co.'s No. 4 Granger is drilling at 3,315 feet. Sun Oil Co. has a fishing job at No. 2 Brown, an old well which is to be deepened from 4,500 feet.

Walker County

Thompson and associates' No. 1 Thompson is shut down in gumbo at 1,730 feet.

In this county, Angelina-Caldwell Co. has a location staked for another test, the No. 1 Matthews.

Waller County

J. R. Garrett and associates' No. 1 Garrett, 12 miles south of Hempstead, is in shale at 746 feet.

Washington County

C. A. DeWare's No. 1 Lehman, at Branham, is shut down in shale and boulders at 2,730 feet. Pratt & Hewitt's No. 1 Koniecszny also is shut down at 3,272 feet.

Wharton County

At Boling, Hyde Production Co.'s No. 1 Fotjek is shut down in hard sand at 2,428 feet. Ingram Prospecting Co.'s No. 1 Mensing also is shut down at 831 feet. Southern Exploration Co. has a derrick and rig up for No. 1 Mullins. The Sun Co. has a location for No. 3 H. R. Farmer.

Victoria County

Elam and associates are building a derrick for a deep test, the No. 1 Kutch-ka, 5 miles south of Inez. Humble Oil & Refining Co.'s No. 1 Welder, 7 miles northeast of Victoria, cored gumbo around 120 feet. Talbott and associates' No. 1 Reeves is in gumbo at 1,603 feet.

LOUISIANA GULF COAST

Calcasieu Parish

In the Edgerly district of Calcasieu Parish, Rex Petroleum Co. has a dry gas well at 3,996 feet in No. 5 Hunter. Davis & Walker's No. 1 Lyons, this field, is drilling gumbo below 3,250 feet. Green Oil Co. has a derrick up for No. 9 Moore, while Drysdale and Savoy Oil Co. are making arrangements to deepen No. 2 Hill. Gulf Refining Co.'s No. 41 Bright Penn also is shut down at 3,751 feet, and No. 43 is standing in sand at 3,425 feet. Rex Petroleum Co. has a location for No. 1 Ecker. Wilson & Broach have a derrick up for No. 6 Wilson. No. 5 Wilson is to be put on the pump. West Edgerly Oil Co. is drilling at 3,915 feet in No. 1 Krouse & Managam.

On the Starks Dome, Gulf Refining Co.'s No. 8 Industrial is coring sand at 4,196 feet, and No. 7 Lutcher-Moore at 4,434 feet.

McDaniel & Ellis' No. 1 Ecker has been shut down. It encountered salt at 4,000 feet. Newton Drilling Co.'s No. 1 Dupre, Lockport, is shut down at 2,500 feet. Vacuum Oil Co. and Gulf Refining Co.'s No. 3 Farquahar, Lockport, is drilling below 3,400 feet, and No. 4 Bayou D'Inde State at approximately the same depth. Their No. 2 Trieber & Wolf is down 5,625 feet, but No. 8 Miller has been abandoned temporarily at 4,400 feet.

In the Vinton district, Vinton Petroleum Co. is rigging up for No. 9 Gordon. This company's No. 5 Rescue has been abandoned temporarily at 2,950 feet. Union Sulphur Co. has a location for No. 722 fee at Sulphur. Plummer Oil Co. is drilling at 3,600 feet.

Acadia Parish

Cine and associates are drilling at 250 feet in No. 6 Conklin, Evangeline Field. Evangeline Oil Co.'s No. 1 Cline is down 1,650 feet. Port City Oil Co. has a location for another test, the No. 8 S. F. S. Its No. 2 on this lease is to be abandoned. The Texas Company's No. 2 Rayne is drilling at 3,525 feet.

Ascension Parish

Gulf Refining Co. almost had a gas b'owout in No. 3 United Land Co. while drilling at 956 feet, but 10-inch casing now has been cemented at 837 feet, and as soon as the cement sets the plug will be drilled and the well tested. This is on the Sorrente Dome.

Cameron Parish

Yount Lee Oil Co.'s No. 5 State on the Hackberry Dome has been abandoned after drilling to 5,350 feet. It was in a sandy lime formation. Louisiana Land & Exploration Co. has a rig up for No. A-1 Calcasieu Lake. Pure Oil Co.'s No. 2 Sweet Lake is pumping salt water at 5,100 feet.

Evangeline Parish

Tom Hincy and associates' No. 1 Ducide Guillery, Pine Prairie, is drilling rock at 1,760 feet.

Iberia Parish

Calcasieu Oil Co. has abandoned No. 1-A Schwing after drilling to 3,962 feet. Gulf Refining Co.'s No. Z-3 State at Faussa Point is to be deepened after testing salt water. This company's No. 1 Broussard in the same district is to sidetrack at 3,100 feet, where the casing was shut. Total depth of the hole is 4,442 feet.

Iberville Parish

Roxana Petroleum Corp. has a rig up for No. 1 Wilbert in the White Castle district.

LaFourche Parish

Gu'f Refining Co. is fishing for the liner lost in No. 1 Dibert-Stark at 1,309 feet. This test is near Thibedeaux.

Terre Bonne Parish

Southern Gas Co.'s No. 3 South Down sanded up some at 1,393 feet after showing a little gas at that depth, and operations now are centered on cleaning out the hole. This test also showed some gas at 1,343 feet. Terre Bonne Gas Co.'s No. 1 Gaidry is drilling gumbo and sand at 2,296 feet.

Jeff Davis Parish

Two tests in Jeff Davis Parish still are shut down, these being John Carrodine and associates' No. 1 Walsh at 1,355 feet and Etropal Oil Co.'s No. 2 LeDoux at 2,980 feet.

OKLAHOMA FIELDS

(Continued from Page 52)

A. G. Oliphant and others' No. 4, NW cor. NE NE Section 20-27-6, is rigging up. The rig has been erected for No. 5, SE cor. NE NE Section 20-27-6. Gypsy Oil Co. is building the rig for No. 3, NE cor. NW Section 28-27-6. Kay County Gas Co. made location for No. 3, SW cor. SE SE Section 9-23-7.

Sand Springs Home's No. 108, SW cor. NE Section 30-21-10, had a show of gas and a hole full of water in Bartlesville sand at 2,020-85 feet and was abandoned. Kewanee Oil & Gas Co.'s No. 3, SE cor. NE SE SE Section 6-21-12, is dry and abandoned at 2,187 feet. Gypsy Oil Co.'s No. 7, NE cor. NW SE Section 28-27-6, was completed for 363 bbls. in the Burbank sand at 2,891-2,945 feet after it was shot. Kewanee Oil & Gas Co.'s No. 4, SW cor. SE SE Section 34-27-6, was shot in the Burbank sand at 2,796-2,875 feet and made 787 bbls. Indian Territory Illuminating Oil Co.'s No. 100, NW cor. SE NE Section, has been abandoned at 1,998 feet.

Okmulgee County

Dewitt-Baldridge Oil Co.'s No. 1-A Ackley, NW cor. NE Section 36-16-13, had Dutcher sand 1,640-42 feet and gauged 14,000,000 gas. Anadarko Western Oil Co.'s No. 1 Soule, NW cor. NE SE Section 24-15-11, is dry and abandoned in the Wilcox sand 2,793-2,816 feet. Jordan & Thompson's No. 1 Perryman, SE cor. SW SW Section 1-14-12, is dry and abandoned in the Wilcox sand at 2,705-31 feet. Kirkland & Sons' No. 2 B. Long, CNL NE NE Section 18-15-13, is shut in for 6,000,000 feet of gas in sand at 2,036-64 feet. Denton & Marshall's No. 1-A McKinney, NE cor. NW Section 16-15-14, is a gas well making 4,000,000 feet from sand 1,890-1,915 feet. J. L. Selby's No. 9 Stevens, CEL NE SW Section 10-14-14, made 10 bbls. after a shot in sand at 1,197-1,204 feet.

Kirkland & Sons' rig is at the location for No. 3 Jimmy, CEL SE Section 8-15-13. Sheedy & McBrayer moved a machine out to drill No. 1 Smith, SW cor. SE Section 9-15-14.

Pawnee County

Sheridan Oil Co. has the rig up for No. 1 Ward, NE cor. SE NW Section 20-20-10.

Payne County

Twin State Oil Co.'s No. 1 Douglas "B," SW cor. NE Section 8-18-4, drilled to 4,700 feet and was abandoned.

Pontotoc County

Shaffer Oil & Refining Co. is rigging up rotary tools for No. 4 Yoakum, NW cor. SW NW NW Section 16-5-8. Louisiana Oil Refining Corp. made location for No. 4 McElroy, NE cor. SW SE Section 17-5-8, Allen Pool. Homaokla Oil Co.'s No. 4 McCall, SE cor. SW NW Section 17-5-8, is drilling at 500 feet. No. 5 McCall, SE cor. NW Section 17-5-8, is down 50 feet. W. R. Ramsey is building the rig for No. 4 Patterson-Harjo, SE cor. SW SW Section 20-5-8. Louisiana Oil Refining Corp. is putting up the rig for

(Continued on Page 145)

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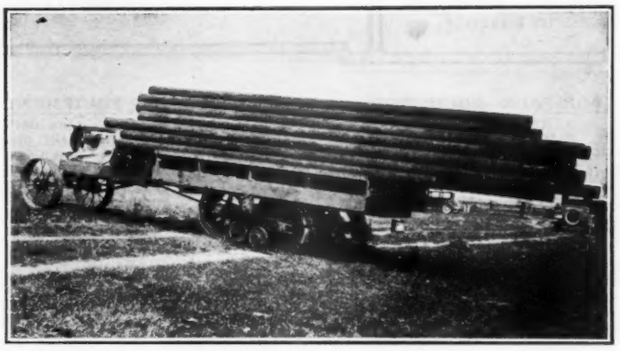

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9 lines	3.15	5.40	7.65	9.90
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Chicago Demand Light; Prices Hold

Vagaries of Weather Reflected in Market for Gasoline and Burning Oils. Exports Aid Kerosene

By J. B. Waldo

CHICAGO, Nov. 14.—Instead of the predicted cold spell with snow the weather turned warm Sunday with heavy rains. It was partly on account of this that there was so little doing in the spot market on Monday. Gasoline was in light demand for any gravity but prices showed no change. The demand for distillate and gas oil which was good the latter part of last week was light Monday but many refineries have business booked ahead including shipping instructions on contracts which had been slow to move.

Kerosene is holding as to price largely on account of export buying refiners state but domestic demand in this market continues just fair for the season. There is an active inquiry for gas oil zero cold test and for the 28-30 with a flash of 210 or better from dealers who are the most active source of orders at present. Several refiners have slightly advanced their quotations over December.

There are considerable offerings from refiners of the heavier fuel oils 24 gravity and lower and this unsettles the market for these oils. The dealers in fuel oils of all kinds hope that the present warm spell will turn to much colder weather and state that if it does there will be a good demand for furnace oils but if it does not the purchases made last week will last for some time. Colder weather on Tuesday is predicted by the weather bureau.

Buying Was Slow

There was nothing to give much encouragement in the spot gasoline market last week. It was very quiet, not to say lifeless all of the week. Contract shipments more than sufficed for the requirements of the dealers who have contracts and there is some slowing up on orders for these deliveries. The spot market buyers are ordering very slowly and for immediate requirements only. There is a good deal of helping each other out with country dealers, one dealer who is out of gasoline buying or borrowing from another who has a good supply and this enables some of the smaller distributors to refrain from buying longer than they would be able to do were it not for this practice which has become much more general than it was. The general gasoline consumption during October was larger than a year ago, but smaller than September. November promises to keep ahead of last year, but not to be as good a month as was October. It is just a routine market based on the number of cars and the use made of them.

It is a fact that is contrary to the expectations of many oil men, that the consumption per car is increasing in spite of engines that give a larger mileage per gallon of gasoline, good roads and more skilled drivers. This fact is attributed to the increase in the number of heavy cars, the motor buses and trucks. These will probably average not over 5 miles to the gallon and there are many of them in daily use. The motor buses make daily runs both in the city and between this and other cities and the same is true in all parts of the country. A recent compilation of railroad earnings for the first seven months of 1927 showed a very large falling off in the revenue from the passenger service and this decrease was particularly noticeable in the revenue derived from the day coaches. This was attributed to motor car competition. The fare from Chicago to Detroit, Milwaukee, St. Louis and other points is a little less than by the railroad on the one way ticket and quite materially so on round trips; the time is only a little longer than by train and the experience is novel and pleasant with many. For short distances the motor coach is being used quite generally in preference to the steam road or trolley line. This fact does not mean that the railroads are standing all of the decrease in revenue for many of these bus lines are operated as feeders by the steam and electric systems. In some cities the roads land their freight at a station outside of the city and deliver from that station to the address of the consignee by truck, bringing no freight cars into the city. It seems to be assured that the use of the truck and the motor coach will increase from season to season thereby doing something to add to the consumption of gasoline.

Storing Gasoline

Supplies of gasoline are more than sufficient. Some of the larger Group 3 refiners state they are now storing Motor gasoline and expect to continue to do so as long as the market remains at its present level. One of these is refusing to sell U. S. Motor gasoline at less than 6¼ cents and is doing very little spot business. There are three, perhaps one or two more, who are holding for 6¼ cents and selling a little spot gasoline to their regular customers. Most of the refiners here were quoting 6⅛ cents for U. S. Motor grade and meeting competition as low as 6 cents. One of these stated that he was not ashamed to say that their price was 6 cents and the only thing that he was sorry for was that they did not make that price sooner when the demand was larger as they would have accumulated some orders for future delivery if they had done so.

For the 400 endpoint the common price with nearly all of the refiners here was 6½ cents to the trade and 7 cents was the quotation on the 375 endpoint. One or two asked more but were sold up but as their orders were filled they usually accepted these prices as the market and sold at that price. In comparison with the output the demand for the higher gravities was better than for the U. S. Motor grade, but the demand was not active. For one thing the weather turned warm and wet late in the week and there was less reason to push the sale of the higher tests by those who did not specialize in them the year round.

Antiknock Demand

There is a good demand for antiknock gasoline and the supply is not yet so large that there is a push for orders. Several new brands that are highly considered, at least by the refiners, are now newly on the market and there is a growing competition between the refiners for the contracts of dealers to take the exclusive agency of their product. Refiners who foresaw the coming demand and were early to offer a satisfactory product in the antiknock class have reaped their reward. But users and dealers are becoming more discriminating and more insistent that the antiknock gasolines have real antiknock value. Some of the largest distributors state they have not yet found a product which satisfies their requirements or which they believe is really better than a good 64-66 375 endpoint gasoline. There is a lot of research work being done, and many brands put forward with claims that are certainly high, if true. So far the ethyl gasoline is a sort of high point of efficiency with many dealers who seek for something that they can honestly recommend to their trade as at least just as good, but even that product, according to some, is not perfect. The natural gasoline demand has been inactive here, some business doing but no rush and prices are unchanged.

Situation Unsettled

The situation to the east and northeast of Chicago is still unsettled by the free offerings from refiners at differential points at prices which figure substantially below the Group 3 basis. Quotations of 7⅛ cents from Mississippi River points to Michigan ond Ohio were common and one large buyer in a central Ohio city reported the offer of U. S. Motor gasoline at a price that figured 5¼ cents Group 3. The price of 7⅛ cents river points figures 5½ cents Group 3. The price situation at Toledo where the tank wagon has been cut 4 cents by all the leading companies is traced by these companies to the offerings of local refiners at their own stations. One refiner, it is stated, reduced his station price 4 cents, then went back to normal and then cut again to be in line with the prices of those who had met the first reduction and had not advanced their prices.

Kerosene in Light Demand

Kerosene is steady with a light demand from domestic buyers and no important buying by exporters. The price holds at 4½ to 4⅝ cents for the 41-43 gravity, the price being pretty much in line with the quantity of gasoline at the refinery. Those refiners who are well sold up are holding for 4⅝ cents and at least one large company for 4¾ cents. There is much less shopping round for kerosene than gasoline and little is gained so far as can be seen by price cutting except that it gives the dealer a larger profit. Many dealers who will buy their gasoline from any one of several refiners will stick to one for their kerosene. The 42-44 gravity is little called for and not largely cut so that the market is steady at 5 cents with little business reported.

Distillates Firmer

Distillates are somewhat more firm, but not generally higher in price. A few days of seasonably cold weather increased consumption and there was a lively distribution, but the cold did not increase but quite the opposite, the weather turned warm. There were one or two of the larger local distributors who inquired for distillate and some active demand from the smaller dealers as well as from the country, but, as with gasoline, so many of the distributors are supplied through contracts that the spot market is not very active, the buying being generally in small quantities, single cars as a rule. Some of the refiners state that their customers are taking every drop on their contracts, others that they have difficulty in securing shipping instructions. There is no doubt that there has been a considerable number of oil burners installed this year and the total consumption with an even break as to weather would be larger than a year ago, but there are more concerns seeking the business and the older distributors have increased their facilities. Some of the larger ones here now have distributing bulk plants in the various sections of the city which has the effect of increasing the competition just as much as if new dealers had started up in the sections where these dealers previously had no distribution owing to the length of the haul from their main plant. The market for a good 38-40 straw distillate is held firmly at 3¼ to 3⅜ cents for spot sales and a 36-38 amber at 3 to 3⅛ cents with more sellers holding for the higher price. Stocks seem to be ample and some of the refiners are writing their contract customers pressing them to give shipping instructions.

Burning Oils

Gas oil is rather quiet industrially but in good demand from dealers who have worked up a business in supplying domestic oil burners. The term domestic oil burner is being used generally for any oil burner that operates automatically and does not require the attention of an attendant. Some of the burners which are installed in large apartment buildings, stores, hospitals, churches and the like use many times as much oil as the smaller burners that are installed in the homes and to which the term domestic burner might be considered as solely applicable. The newer designs of domestic burners operate on gas oil and the saving effected by this fact is quite a talking point with the seller of oil burners of this design. The salesman is very apt to call the oil, fuel oil and sometimes cheap fuel oils.

Some of the makers of these burners state that they have operated their burner successfully on lower gravities than a 28-30 gas oil but they do not recommend this fuel as it requires that the oil have special qualities and the burner be adjusted for the lower gravity. The adjustment of the burner to the oil is important to the economical operation of the burner and complaint is made when a burner adjusted for a 28-30 gas oil is supplied with a 32-36 gas oil or a low gravity distillate that the oil burns too fast and is wasted. The supply of zero gas oils in any gravity is limited, very little of the 28-30 gas oil is to be had so that this is usually a blended oil. Some refiners so state regarding this product and practically all of the 28-30 gas oil coming to this market is stated to be a blend.

The industrial demand is just fair. Many of the gas companies are supplied and will only buy for storage when they get a low price. They do not have to buy but will fill up their storage if they can do so cheaply. Some of the syndicates of gas oil buyers have made inquiries during the week. These represent plants located in adjoining or nearby small cities and they buy through one organization. As their individual storage is limited they cannot supply themselves ahead and several of them do not contract but buy as they require supplies. They have been quoted 2⅜ cents in several instances, other refiners quoting 2½ cents. This is usually straight-run oil meeting the U. G. I. specifications, the chief item of these specifications being the low sulphur content although there are simple distillation requirements.

Zero Oils Firm

The market for zero oils is firm at full prices. What variations there are in prices seem to depend to an extent on the quality of the oil considering color, flash, fire and cold tests. Several refiners who have a desirable oil are holding their product for 3 cents for resale and this grade is on the market at 3⅛ to 3¼ cents. A little less desirable oil in some of these requirements is sold for resale at as low as 2¾ cents and would be marketed at 2⅞ to 3 cents. One refiner with a dark amber oil which is, except for color, very desirable, has sold some of his surplus at 2¾ cents but the quality is limited in this case for the entire output is under contract but has not been taken out owing to weather conditions and as the refinery is operating right along at nearly capacity further accumulations are not wanted. The past week proved that it will take more than a few days of cold weather to really bring the distributors into the market for material quantities of oil. With a cold snap there is a rush for a day or two and then the demand slumps off until it is hard to keep the trucks out of the garage.

Fuel Oils

Fuel oil is in something of the same position as gas oil. There is a fair consumption which would be increased by cold weather if it only remained long enough to add to the demand for the generation of power and for manufacturing uses such as in the steel and brick plants for example, the demand for oil for the generation of heat. This has not

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East Believes Prices Are at Bottom

Feeling That Next Move Will Be for Better. West Texas Skimming May Lead to Reduction in Fuel Oil Quotations

By N. O. Fanning
New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Nov. 12.—Little change has been recorded in the refined oil markets on the Atlantic seaboard during the past week. It is firmly believed by many students of the market that prices have reached bottom and that the next definite change will be for the better. However, opinion is divided as to when that change will come, predictions ranging all the way from some time in December to early next spring. To put it less optimistically, many believe that things could get no worse than they are at present, especially so far as gasoline is concerned.

Fall consumption of gasoline and lubricating oil has been extremely satisfactory, and the movement of other products into channels of consumption cannot be complained of. However, the statistics of production are regarded as an ominous sign when each month shows an additional increment in stocks on hand, and certainly, in the opinion of many, it will take a somewhat continuous withdrawal on storage over a substantial period of time before the oil industry can be regarded as past the crisis.

There is one feature of the situation of the past year that has been encouraging. The demand for almost every important oil product has been increasing substantially. This means that when the turn for the better comes, it will take less time for the industry to get into a sound statistical position than would otherwise be the case. In other words, the increase in stocks of oil on hand, for instance, and especially crude oil stocks, is not quite as serious as appears on the surface, although the situation is bad enough.

The steady gain in consumption has staved off a much more drab situation than has actually developed, and in the end should effect a change for the better which will be more far-reaching than some will expect.

Gasoline Weak

Continued price-slashing in various sections of the Atlantic seaboard is evident in the gasoline market, especially at service stations. Refinery prices, however, have held steady. United States motor gasoline is not available below 8 cents, f. o. b. refinery, at Bayonne, and some trades have been reported as high as 8¼. Tank car material still moves heavily from refineries to inland points despite the seasonal decline in demand and a reported increase in railroad receipts from the west. The effect of the dumping of "distress" gasoline is more local than general along the Atlantic seaboard. It is more evident in the western portion of the territory than near the coast. Independent cargoes of gasoline have been less numerous during the past two or three weeks, and this has been reflected in a slightly more firm tone in some coastal sections. It is reported more difficult to get cargo material than formerly from the Gulf Coast and California, and it is not so easy to obtain clean vessels, either.

There has been considerable rain on the Atlantic seaboard during the past week, but retailers are paying less and less attention to weather and seasonal conditions, as the demand seems to hold up despite these factors. Although demand may be restricted a day or two, the falling off is made up for as soon as favorable weather arrives.

Kerosene

The kerosene market continues strong. A further advance in refinery prices may be looked for in the near future, according to some factors. This is largely because of a heavy domestic demand for furnace oil, gas oil, Diesel oil and kerosene for export, all of which are tending to bringing about a shortage of what are known as the prime white and water white grades of kerosene. Water white is steady at 7½ cents in tank car lots, f. o. b. refinery, but as result of the scarcity and strength of water white, the market for prime white has improved somewhat. Both grades are moving briskly. Furnace oil is taking a lot of the heavier kerosene fractions, including principally the 38-40 gravity material. The demand for furnace oil is increasing steadily as new oil burners are installed. This market is handled largely by refiners on a tankwagon basis. Sales f. o. b. refinery are limited. In order to supplement their normal supply, many Atlantic Coast refiners are moving furnace oil in bulk from California and the Gulf Coast. This is an indication of the heavy demand for this product.

Gas Oil

Gas oil is firm with 28 plus quoted at 5½ cents, f. o. b. refinery, in tank cars. There have been some big export sales of 32 gravity gas oil recently for use in cracking in European refineries. This has helped clean the domestic market somewhat. Some refiners are selling 26-28 gas oil in considerable quantities to the domestic trade and getting about as much as for the 32 gravity material.

Gas oil is being used on a larger scale with Diesel oil to bring up the quality, especially the 26-28 grade. There is also a bigger domestic demand for 32-36 gas oil for cracking purposes.

Paraffin Wax

The paraffin wax market is active. Prices are unchanged. The higher melting points are in best demand. Some sales of 135-137 a.m.p. were reported at 6 cents a pound, but the trade generally sticks to 5¾ as the most representative quotation at present.

Fuel Oil

The domestic fuel oil market is somewhat weak. West Texas oil is blamed largely for this situation, as this crude is being "skimmed" on quite a large scale at present, both on the Atlantic and Gulf coasts. This is a comparatively new factor in the market and may result in a further cut in prices in the near future.

Diesel oil continues firm and unchanged in price.

Lubricating Oils

Lubricating oils are generally firm. Cylinder stocks are still somewhat weak, but in all other departments business is improving. Flood conditions in New England partially crippled many industries, but the damage is not serious. Probably a smaller demand for certain lubs will result, but local refiners report no change yet. Spindle oils are most likely to be affected.

Petrolatum

The petrolatum market is dull and prices are about the same as last week. Dark green petrolatum is moving in carload lots at prices ranging from 1⅞ to 2 cents a pound, with most of the business reported at 1⅞. Lily white and snow white are fairly active at 7½ and 8½ cents a pound, respectively.

Export Market

The oil export situation appears to be somewhat improved in many respects as a result of the gradual passing of many disturbing influences which were present most of the early part of the year. It is said that in England prices are more stabilized at current levels, and that in France and Italy conditions are better. In Spain, however, the efforts of the Government to carry out its plans for a monopoly to the exclusion of practically all interests which have been operating in that country caused considerable uncertainty and the outlook is obscure. The demand for bulk gasoline, kerosene, gas oil and other products of American origin throughout Europe is increasing, evidently due to the change in attitude of many foreign oil interests regarding the American oil price outlook. Spot orders are understood to have been placed in large number at the Gulf and Atlantic ports but always at current prices. Apparently foreign buyers are anxious to obtain all they can before any price advance occurs, without, however, forcing an advance. In most instances they are met with ready offers of material, in as much as many American exporters of oil products are not optimistic with regard to the immediate outlook.

Doubtless industrial activity throughout Europe is on the up grade. This is reflected in liberal orders for cylinder oils and greases and the general increase in consumption of industrial oils. Europe has been steadily gaining its poise industrially, and every effort has been made to reduce costs so that goods could be supplied abroad in competition with American products. Some success has been attained and an improved business outlook is the result.

Still Need American Oils

With regard to petroleum, however, Europe has not been able to make itself independent of American goods. While producers in Russia, Rumania and other fields outside of the United States have been engaged in terrific price slashing, the quantity of oil they are able to supply has been too small to give them a permanent foothold in the European markets. In addition American methods of refining and marketing have proved a helpful factor in making American goods popular in Europe, despite reports of the general efforts to avoid American products.

Spain has apparently taken a further step in its efforts to create an oil monopoly. Arrangements are understood to have been concluded whereby the Petroleum Export Association, a subsidiary of the American Republics Corp., received the contract to supply the Spanish oil monopoly with petroleum and petroleum products for a period of five years.

James H. Durbin, treasurer of the American Republics Corp., said that advices received from the company's representatives in Madrid, announcing the award of the contract, gave no details. He was unable to state whether the contract is an exclusive one, under which the American Republics Corp. would furnish all of the oil and oil products required by the Spanish monopoly, but was under the impression that the contract is exclusive.

In 1926 American oil exports to Spain consisted of 1,143,000 bbls., including crude and refined, and 16,615,000 pounds of wax, the value of both items combined being $7,880,000. Gasoline was the largest item in both quantity and value, shipments totaling 682,000 bbls. valued at $1,514,000. Lubricating oil shipments were 117,000 bbls., valued at $1,514,000. Kerosene exports were 140,000 bbls. valued at $608,000, gas and fuel oil 204,000 bbls. worth $447,000, while wax was valued at $976,000.

Spanish Contract

The announcement of the granting of this contract caused considerable surprise in local oil export circles, in as much as none of the companies exporting from this port had received advices from their Spanish correspondents concerning it. In addition, reports had come from Madrid that the monopoly was to depend entirely on Russian and Venezuelan oil. Furthermore, no details have yet been forthcoming with regard to the manner in which the Spanish properties of present oil interests there would be taken over. These properties are estimated to have a value of at least $20,000,000.

Soviet statistics just published show that crude oil production in Russia this year will approximate 70,000,000 bbls., a new high postwar record.

The market for American oils in South America continues excellent, as evidenced by continued heavy shipments from New York to Chile, Peru, Argentina, Uruguay

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LUBRICANTS EXTREMELY UNSETTLED IN GULF COAST REFINERY MARKET

HOUSTON, Tex., Nov. 14.—Offering of substantial quantities of the higher viscosity filtered stocks on the open market by two large refining and marketing companies has resulted in an extremely unsettled tone in the Gulf Coast lubricating market. An abnormally short demand for this time of year has made the situation more acute.

It was difficult to determine, the past week, a true market on lubricants as stocks were being offered at wide ranges of quotations and although smaller refiners were trying to hold up a market structure they were forced to meet sharp competition. One large company, which recently developed a new process of refining filtered stocks has been offering all stocks from 500 to 3,000 viscosity as much as 3 cents under the previous prevailing market.

This company until the past few months has had export outlets for practically all its output but with these movements now stopped it is placing virtually all its material on the open market. Another large company immediately started meeting competition, and, it is understood export contracts of the latter company will expire within 90 days which may force additional quantities of lubs on the open market.

Price cutting of filtered stocks in some cases forced quotations on these grades below those of corresponding grades of unfiltered stocks forcing general lowering of the market structure.

Warm weather throughout the country until now has been reflected in a slow demand for Gulf Coast lubricating oils. Ordinarily at this time of the year products from this district, which meet zero cold tests, are moved northward to replace demand in other districts not manufacturing such products in large quantities. The cold wave which has been sweeping the northern states the past few days, however, is expected to cause some improvement in the demand for Gulf Coast products.

Fuel oil and gas oil are showing very little change. Very little of these products is offered here and prices generally are maintained only just low enough to keep out fuels from North Texas. The majority of gas oil here is moved on export orders although what is open now is bringing from 3¾ to 4 cents. Fuel oil prices, while reflecting North Texas prices, are based to some extent on bunker quotations which now range from $1.20 to $1.30. Fuel moved to local industries is bringing a slightly higher figure, ranging around $1.35 to $1.40.

Atlantic Coast Operations Analyzed

Sources and Distribution of Major Petroleum Products for 1926, Compared With Similar Data for Preceding Year

By E. B. Swanson
Economic Analyst, Bureau of Mines

This analysis of the sources and distribution of petroleum and its major products in the Atlantic Coast states was prepared by the Bureau of Mines in co-operation with the American Petroleum Institute for the purpose of presenting certain fundamental statistics pertaining to the industry during 1926. Comparisons are made with similar information collected previously relating to 1925.

During 1926, the area included in this report, consisting of the 17 Atlantic Coast states and the District of Columbia, was dependent upon other domestic and foreign sources for 98.3 per cent of the crude oil put through the refineries located on the Atlantic seaboard; 47 per cent of the gasoline consumed, including exports, and 47.2 per cent of the gas oil and fuel oil delivered. Oil production in western Pennsylvania and New York furnished 1.7 per cent of the crude oil refined. The output of Atlantic Coast and Appalachian refineries supplied 53.0 per cent of the gasoline and 52.8 per cent of the gas oil and fuel oil delivered.

Total runs to stills of domestic and foreign crude oil were 2,310,000 bbls. larger than in 1925. This increase is a balance between a decrease of 3,253,000 bbls. in the quantity of domestic crude oil refined and an increase of 5,563,000 bbls. in the amount of foreign crude oil refined during 1926, as compared with 1925. Total Atlantic Coast receipts of domestic crude oil during 1926 were slightly larger than in 1925, being 103,056,000 bbls. as compared with 102,798,000 bbls. in 1925. The larger refinery runs of domestic crude oil in 1925 were due to the fact that 3,303,000 bbls. were withdrawn from refinery storage during 1925 to augment the quantities received, while during 1926, 805,000 bbls. were added to storage.

Shipments of crude oil by tankers from Gulf Coast ports increased from 72,556,000 bbls. in 1925 to 78,992,000 bbls. in 1926, while receipts by pipe line decreased from 16,246,000 bbls. in 1925 to 12,069,000 bbls. in 1926. The pipe line receipts in 1926 from the Appalachian and Illinois Fields were approximately equal to those of 1925, but pipe line receipts from the Mid-Continent fields decreased from 11,903,000 bbls. in 1925 to 7,458,000 bbls. in 1926. Tanker receipts of crude oil from California were 2,000,000 bbls. less than in 1925. Total receipts of foreign crude oils, including topped crudes and other fuel oils, increased from 50,763,000 bbls. in 1925 to 52,492,000 bbls. in 1926.

The following statement summarizes the receipts and distribution of domestic crude oil in the Atlantic Coast area during 1926:

DOMESTIC CRUDE OIL SUPPLY, ATLANTIC COAST—1926

Receipts—	Barrels	%
By tankers from Gulf Coast ports	78,992,000	76.7
By pipe lines:		
From Mid-Continent fields	7,458,000	7.2
From Appalachian and Illinois	4,611,000	4.5
By tankers from California ports	11,995,000	11.6
Total Atlantic Coast receipts	103,056,000	100.0
Distribution—		
Run to stills	101,347,000	98.3
Added to refinery storage	805,000	.8
Burned as fuel	770,000	.8
Exported	111,000	.1
Balance	23,000	....
Total distribution	103,056,000	100.0

FOREIGN CRUDE AND FUEL OIL SUMMARY, ATLANTIC COAST—1926

Receipts—	Barrels
Total receipts crude, fuel oil and topped crudes	52,492,000
Drawn from refinery storage	464,000
Total	52,956,000
Distribution—	
Run to stills	29,329,000
Burned as fuel	23,627,000
Total	52,956,000

As a result of the co-operation of all companies shipping crude oil from Gulf Coast to Atlantic Coast ports, it is possible for the bureau to present a statement showing the monthly shipments, quantities in transit, and receipts of crude oil shipped from Gulf Coast ports to Atlantic Coast ports.

MOVEMENT OF CRUDE FROM GULF COAST TO ATLANTIC PORTS—1926*
(In Barrels of 42 gallons)

	Shipped from Gulf ports	In transit	Received at Atlantic ports
1925—			
December	.....	1,318,135	.....
1926—			
January	5,785,411	1,907,411	5,196,135
February	4,326,057	360,253	5,873,215
March	5,363,200	1,220,579	4,502,874
April	6,477,093	1,501,803	6,195,869
May	6,489,189	1,342,916	6,648,073
June	7,470,796	1,275,101	7,538,611
July	7,543,233	1,141,853	7,676,481
August	7,278,720	1,914,696	6,505,877
September	5,890,536	1,097,230	6,708,002
October	7,757,064	1,861,143	6,993,151
November	7,054,196	1,016,909	7,898,430
December	7,359,222	1,121,196	7,254,935
Totals	78,794,714	.....	78,991,653

*Compiled by J. W. Mashaw, San Francisco office, and A. H. Redfield, Washington office, Bureau of Mines.

Gasoline Production, Receipts and Distribution

Production of gasoline by Atlantic Coast refineries advanced from 41,527,000 bbls. in 1925 to 46,142,000 bbls. in 1926, an increase of 4,615,000 bbls., or 11.1 per cent, over 1925. This percentage increase in refinery production of gasoline corresponded with an average increase of 13.6 per cent in gasoline consumption in the Atlantic Coast area. The increased gasoline production was due partially to the fact that 2,277,000 more barrels of domestic and foreign crude oil were run through the refineries in 1926 than in 1925 but more largely to the fact that more gasoline was produced from the crude oil in 1926 than in 1925. The average recovery of gasoline per barrel of crude oil refined in 1925 was 32.4 per cent, or 13.6 gallons, which was increase dduring 1926 to 35.3 per cent, or 14.8 gallons. The greater recovery during 1926 was due to the increased output of gasoline by "cracking." The output of straightrun gasoline decreased from 61.1 per cent of the Atlantic Coast gasoline production during 1925 to 53.2 per cent in 1926, while the output of gasoline by "cracking" increased from 31.2 per cent in 1925 to 38.6 per cent in 1926. The use of natural-gas gasoline accounted for 7.7 per cent of the 1925 output and 8.2 per cent of the 1926 output.

During 1925 the gasoline production of Atlantic Coast refineries supplied 49.2 per cent of the total Atlantic Coast demand, including exports. Although production increased during 1926, it supplied a slightly smaller percentage of the total gasoline demand, 48.8 per cent.

The following table summarizes the sources and distribution of gasoline in the Atlantic Coast area:

ATLANTIC COAST GASOLINE SUMMARY 1926

Production and receipts—	Barrels	%
Produced by Atlantic Coast refineries	46,142,000	48.8
Received by tankers from Gulf Coast ports	33,443,000	35.4
Received by tankers from California ports	8,031,000	8.5
Received from foreign ports	2,911,000	3.1
Shipped from Appalachian refineries	3,306,000	3.5
Drawn from Atlantic Coast refinery stocks	654,000	.7
Total available for distribution	94,487,000	100.0
Distribution—		
Consumed in Atlantic Coast states	86,128,000	91.2
Exported from Atlantic Coast districts	7,489,000	7.9
Probable evaporation losses.	870,000	.9
Total distribution	94,487,000	100.0

The quantity reported shipped from Appalachian refineries is a total representing tank car shipments from Appalachian refiners to points in the Atlantic Coast states, as reported to the Bureau of Mines. The probable evaporative loss is computed as one-ninety-ninth of the consumption in the Atlantic Coast states, or a loss of 1 per cent estimated as occurring between the refineries or terminals and final delivery at the service station to the consumer.

The accompanying tabulation shows the motor vehicle registration and gasoline consumption by states for the Atlantic Coast area for 1925 and 1926. Information as to motor vehicle registration was obtained from the Bureau of Public Roads, Department of Agriculture. Information on gasoline consumption was obtained directly from state officials administering the motor fuel tax for all states except Massachusetts, New York, and New Jersey. The gasoline consumption in these three states, which had no gasoline tax in 1926, was estimated on the basis of available information.

Gas and Fuel Oil Distribution, Atlantic Coast States, 1926

Production of gas and fuel oil at Atlantic Coast refineries during 1926 totaled 59,972,000 bbls., an increase of 1,047,000 bbls. over the 1925 production. The refinery production of gas and fuel oil supplied 51.5 per cent of the total quantity distributed and was augmented by 23,627,000 bbls. of topped crude and fuel oil received from foreign ports; 18,301,000 bbls. received from Gulf Coast ports; 12,266,000 bbls. received from California; 1,584,000 bbls. shipped from Appalachian refineries; and 770,000 bbls. of domestic crude oil which was burned directly as fuel, or a total quantity of 116,520,000 bbls. available for distribution for commercial and industrial fuel purposes. Of the total quantity available, 111,531,000 bbls. were marketed in Atlantic Coast states; 1,876,000 bbls. shipped to foreign countries; 861,000 bbls. shipped to states other than on the Atlantic seaboard; 1,027,000 bbls. added to the quantity held in storage at refineries; leaving a balance of 1,226,000 bbls., which include losses in handling and additions to quantities held in storage at other points than refineries.

The production, receipts and distribution of gas and fuel oil in the Atlantic Coast area during 1926 are shown in the following table:

GAS AND FUEL OIL SUMMARY, ATLANTIC COAST—1926

Production and receipts—	Barrels	%
Produced by Atlantic Coast refineries	59,972,000	51.5
Received from foreign ports	23,627,000	20.3
By tankers from Gulf Coast ports	18,301,000	15.7
By tankers from California ports	12,266,000	10.5
Shipped by Appalachian refineries	1,584,000	1.3
Domestic crude oil burned as fuel	770,000	.7
Total available for distribution	116,520,000	100.0
Distribution—		
Marketed in Atlantic Coast states	111,530,000	95.7
Exported from Atlantic Coast districts	1,876,000	1.6
Shipped to other states	861,000	.7
Added to Atlantic Coast refinery storage	1,027,000	.9
Balance	*1,226,000	1.1
Total distribution	116,520,000	100.0

*The balance 1,226,000 includes losses in handling and such increases as were made to quantities held in storage at places other than refineries.

Of the 111,530,000 bbls. marketed in the Atlantic Coast area, 104,617,000 bbls. were delivered directly to consumers by refiners marketing in Atlantic Coast states and 6,913,000 bbls. were delivered by the refiners to jobbers and marketers who, in turn, delivered to the consumer. Of the 6,913,000 bbls. handled by jobbers and marketers, it was possible to obtain information as to final distribution on 3,583,000 bbls., leaving a quantity of 3,330,000 bbls. distributed by marketers on which information as to final delivery is lacking.

In preparing the first study of Atlantic Coast gas and fuel oil distribution, that covering, 1925, no attempt was made to obtain information as to distribution by jobbers and marketers. In making the 1926 study, however, the Bureau of Mines was able to obtain from some of the larger jobbers and marketers information covering distribution in 1925 and 1926, with the result that the 1925 figures have been changed to include the distribution by such marketers. Marketing companies which were not included in the 1925 study reported a 1926 distribution of 932,872 bbls. which is included in the following statement covering 1926 distribution. Deducting this quantity from the 1926 total, the 1926 distribution of all companies included in the 1925 total would be 109,142,900 bbls. as compared with a 1925 distribution of 109,564,043 bbls. This would indicate that there was little change during the year in the total demand for fuel oil in the Atlantic Coast area.

The following table gives a comparison by uses between 1925 and 1926. This was compiled from reports received by distributing companies and does not include the 3,330,000 bbls. handled by marketers, on which it was not possible to receive information as to final distribution.

GAS AND FUEL OIL DISTRIBUTION BY USES
Atlantic Coast States, 1925-1926
(In barrels of 42 gallons)

Uses—	1925	1926
Railroads	4,165,693	4,327,478
Bunker oil, including company tankers	32,479,711	31,358,716
Gas and electric power plants	15,015,420	16,041,485
Smelters and mines	1,593,938	2,187,058
Shipbuilding, steel mills and foundries	9,026,220	8,878,016
Automotive industries.	239,590	441,926
Sugar refineries	1,111,283	895,784
Logging and lumbering	51,417	42,830
Cement and lime plants	440,575	488,933
Brick and clay plants.	623,918	933,426
Food industries	1,021,896	1,066,616
Other manufacturing.	18,904,232	19,890,777
Heating of buildings.	6,113,875	7,744,267
United States Navy, Coast Guard, Army transports	1,732,802	1,034,654
Used as fuel by oil companies	14,534,346	15,090,275
Nonsegregated uses	718,682	1,867,219
Exports	2,690,445	1,876,312
Total distribution accounted for	109,564,043	110,075,772
Nonsegregated distribution by marketers	.....	3,330,000
		113,406,000

GAS AND FUEL OIL MARKETED ON ATLANTIC COAST—1926

Distribution by uses—	Barrels	%
Bunker oil, including company tankers	31,358,715	27.7
Manufacturing	19,670,292	17.4
Gas and electric power plants	16,041,485	14.1
Used as fuel by oil companies	15,800,777	13.3
Smelters, foundries, steel mills and shipbuilding plants	11,065,074	9.7
Heating of buildings	7,744,267	6.8
Railroads	4,327,478	3.8
Nonsegregated distribution by jobbers, etc.	3,330,621	2.9
United States Navy, Coast Guard, Army transports, etc.	1,034,654	.9
Miscellaneous uses	1,867,219	1.7
Marketed in Atlantic Coast states	111,530,981	98.3
Exported from Atlantic Coast districts	1,876,312	1.7
Total distribution, Atlantic Coast, 1926	113,406,393	100.0

The following table shows the total quantity of gas and fuel oil marketed in each of the states during 1926. Deliveries of bunker oil are credited to the state in which delivery was made and exports to

the district from which shipment departed.

State—	Barrels marketed
Maine	1,643,572
New Hampshire	179,615
Vermont	108,816
Massachusetts	12,330,119
Rhode Island	4,633,549
Connecticut	2,427,964
New York	35,872,875
New Jersey	17,136,766
Pennsylvania	17,672,589
Delaware	884,014
Maryland	5,415,639
District of Columbia	758,570
Virginia	1,558,646
North Carolina	360,127
South Carolina	1,485,982
Georgia	1,604,517
Florida	9,305,602
Total Atlantic Coast	113,406,393

The lowered price of fuel oil in California during 1926 affected the Atlantic Coast situation in two ways. First, the quantity received by Atlantic Coast distributors, including gas oil, increased from 1,298,000 bb'ls. in 1925 to 12,266,000 bbls. in 1926. The second influence would seem to be in the decreased amount delivered as bunker oil and to naval vessels. Deliveries of bunker oil at California points showed a considerable increase in 1926 over 1925, which would indicate that some vessels which had received bunker oil at Atlantic Coast ports during 1925 were bunkered at California ports during 1926. Such a change applied to oil tankers alone undoubtedly would be of sufficient magnitude to result in the decrease shown.

The increase shown in the consumption of gas and fuel oil by gas and electric power plants is accounted for almost entirely by increases shown in the five South Atlantic states. The distribution in these states increased from 1,616,997 bbls. in 1925 to 2,647,957 bbls. in 1926, while, of the five states, Florida alone showed an increase from 1,106,653 bbls. in 1925 to 1,830,543 bbls. in 1926. The United States Geological Survey reports an increase in the consumption of oil as fuel in power plants in the South Atlantic states from 1,724,000 bbls. in 1925 to 2,299,000 bbls. in 1926, while reports received from some of the larger manufacturers of artificial gas in the same region indicate a similar increase in the consumption of oil for the enrichment of water gas.

The decrease shown under the heading of "other manufacturing" occurred largely in the New England states and probably indicates a smaller consumption by the textile and shoe industries in that region, which are the largest consumers. The distribution under this heading for the six New England states decreased from 10,534,084 bbls. in 1925 to 8,813,121 bbls. in 1926.

Information pertaining to the distribution of gas and fuel oil, divided by states and industries, was made available through the courtesy and co-operation of all of the major refining and marketing companies operating in the Atlantic Coast area. The companies co-operating in this survey and whose deliveries are included in the total tabulation are: Asiatic Petroleum Co., Ltd., Atlantic Refining Co., Barber Asphalt Co., Beacon Oil Co., Cities Service Refining Co., Crew Levick Co., Galena Signal Co. of Texas, Gulf Refining Co., Humble Oil & Refining Co., New England Oil Refining Co., Pan American Petroleum & Transport Co., Paragon Refining Co., Petroleum Heat & Power Co., Prudential Oil Corp., Pure Oil Co., Roxana Petroleum Corp., Sinclair Refining Co., Standard Oil Co. of Kentucky, Standard Oil Co. of New Jersey, Standard Oil Co. of New York, Sun Oil Co., The Texas Company, Tide Water Oil Co., Vacuum Oil Co. and the Warner-Quinlan Co., in addition to which there were a large number of smaller marketers who courteously offered information relative to their distribution. The co-operation of these companies is gratefully acknowledged.

Accompanying tables show the distribution of gas and fuel oil in the Atlantic Coast area divided by states and industries.

DISTRIBUTION OF GAS OIL AND FUEL OIL—MIDDLE ATLANTIC STATES—1926

	Maine	N. H.	Vermont	Mass.	R. I.	Conn.
Railroads	3,738	.....	2,195	247,553	15,818	57,331
Steamships (inc. tankers)	16,321	.....	.....	1,221,531	28,374	19,108
Gas and electric power plants	134,871	37,289	24,772	1,687,904	324,836	472,675
Smelters and mines	.....	299	.....	3,944	235	1,526
Shipbuilding, steel mills, foundries	28,193	.....	5,447	396,937	282,382	391,745
Automotive industries	.....	.....	.....	12,985	.....	28,851
Sugar refineries	.....	.....	.....	20,000	.....	.....
Logging and lumbering	.....	14,981	.....	.....	.....	410
Cement and lime plants	.....	.....	12,706	116,461	.....	3,163
Ceramic industries	.....	3,328	3,198	49,243	.....	90,455
Food industries	9,705	472	2,341	112,356	10,509	13,178
Other manufacturing	1,365,092	78,415	10,425	4,040,821	2,416,161	902,207
Commercial heating	38,929	31,807	4,901	1,932,934	642,810	187,006
Domestic heating	6,953	6,920	6,164	237,436	18,116	36,549
U. S. Navy, Army transports and Coast Guard	.....	.....	.....	207,570	58,378	65,821
Used in company operations	9,412	714	719	1,328,658	490,368	2,414
Miscellaneous uses	3,651	1,005	344	303,235	278,243	8,751
Exports	522	.....	26,228	194,421	.....	.....
Nonsegregated dist., jobbers, etc.	26,185	4,385	9,376	216,130	67,319	146,774
Total	1,643,572	179,615	108,816	12,330,119	4,635,549	2,427,964

Note: Major items under "Other manufacturing" include deliveries to the following industries: textiles, paper, shoe and leather, bleacheries, explosives, asphalt and building materials, rubber and chemical.

DISTRIBUTION OF GAS OIL AND FUEL OIL—MIDDLE ATLANTIC STATES—1926

	New York	N. Jersey	Pa.	Del.	Md.	D. C.
Railroads	1,079,436	37,067	304,863	5,388	55,746	815
Steamships (inc. tankers)	20,362,273	465,851	5,083,034	9,136	1,176,562	.....
Gas and electric power plants	6,264,752	1,103,676	2,201,434	78,011	513,690	549,618
Smelters and mines	346,198	460,715	13,129	.....	356,000	.....
Shipbuilding, steel mills, foundries	555,562	1,810,574	3,701,388	193,160	1,450,183	.....
Automotive industries	175,579	119,099	18,674	.....	.....	.....
Sugar refineries	9,755	552,772	97	.....	62,450	.....
Logging and lumbering	923	1,581	.....	.....	.....	.....
Cement and lime plants	184,368	.....	172,117	.....	.....	.....
Ceramic industries	261,366	253,898	102,194	27	13,200	.....
Food industries	139,968	152,286	57,971	7,148	18,789	.....
Other manufacturing	1,079,163	2,344,664	1,030,290	495,596	313,140	.....
Commercial heating	1,810,772	217,850	1,290,929	59,125	35,147	187,166
Domestic heating	564,654	122,634	225,431	476	.....	9,709
U. S. Navy, Army transports and Coast Guard	338,760	343	199,919	2,058	53,285	10,109
Used in company operations	1,754,760	7,034,682	2,316,224	.....	1,230,401	.....
Miscellaneous uses	260,620	154,064	68,101	33,892	2,912	1,153
Exports	675,443	.....	708,394	.....	.....	.....
Nonsegregated dist., jobbers, etc.	8,523	2,332,441	178,400	.....	134,132	.....
Total	35,872,875	17,136,766	17,672,589	884,014	5,415,639	758,570

Note: Major items under "Other manufacturing" include deliveries to the following industries: textiles, paper, shoe and leather, bleacheries, explosives, asphalt and building materials, rubber and chemical.

DISTRIBUTION OF GAS OIL AND FUEL OIL—MIDDLE ATLANTIC STATES—1925
(Barrels of 42 gallons each)

Distribution by Uses—	Virginia	N. Car.	S. C.	Ga.	Fla.	Ttl. for Atlantic Coast
Railroads	59,686	17,075	4,591	42,746	2,393,432	4,327,478
Steamships (Inc. tankers)	1,079,777	13,297	500,931	211,446	1,171,075	31,358,716
Gas and electric power plants	131,754	86,230	62,004	537,426	1,830,543	16,941,485
Smelters and mines	7,904	153	.....	.....	996,955	2,187,053
Shipb'lding, steel mills, foundries	61,386	.....	.....	1,059	.....	3,878,016
Automotive industries	23,384	52,626	.....	533	10,195	441,926
Sugar refineries	.....	.....	.....	250,710	.....	895,784
Logging and lumbering	5,344	451	600	344	18,196	42,830
Cement and lime plants	.....	.....	.....	.....	118	488,933
Ceramic indus.ries	10,788	1,375	21,234	36,501	86,619	933,426
Food industries (canning, baking refrigerating, etc.)	42,477	9,786	4,883	98,911	385,836	1,066,616
Other manufacturing	32,628	20,535	18,637	11,155	1,641,848	15,800,777
Commercial heating	3,700	20,607	155	14,015	28,277	6,506,130
Domestic heating	.....	1,425	.....	1,571	100	1,238,137
U. S. Navy, Army transports and Coast Guard	8,812	14,699	45,477	25	29,398	1,034,654
Used as fuel by oil companies	39,257	.....	608,796	262,842	11,026	15,090,275
Miscellaneous uses	9,278	33,482	16,887	34,922	606,679	1,867,219
Exports	58	.....	177,072	87,684	6,490	11,876,312
Nonsegregated dist., jobbers, etc.	42,413	38,386	24,715	12,627	88,815	3,330,621
Total	1,558,646	360,127	1,485,982	1,604,517	9,305,602	113,406,393

Note: Major items under "Other manufacturing" include deliveries to the following industries: textiles, paper, shoe and leather, bleacheries, explosives, asphalt and building materials, rubber and chemical.

EAST BELIEVES BOTTOM PRICES ARE REACHED

(Continued from Page 135)

and Brazil. These are at a record rate. Gasoline and kerosene are in particularly good demand on the East Coast of South America, but there has been a noticeable increase in demand for lubricants in Chile and Peru and New York exporters have received more and more of the business. Competition from other areas has been overcome by the special grades of oil supplied from this port.

The oil export situation in the Far East is featured by the announcement of arrangements entered into between Atlantic Refining Co. and the Union Oil Co. of California for marketing jointly in Australia. Bulk and retail distributing stations and terminals will be built.

At present Vacuum Oil Co. and The Texas Corporation are understood to be the leading American oil marketers in Australia. The Anglo-Persian Oil Co. entered the Australian market on a large scale some years ago, but it did not have the success anticipated, despite the fact that the company is controlled by the British government.

Exports of oil products from Australia have been exceptionally large and developments in the country are watched here with a great deal of interest.

New York Shipments

Shipments from New York harbor during the week ended November 9 were exceptionally small, following the large exports reported during the two previous weeks. The principal feature of the movement was a shipment of 2,623 tons of petroleum asphalt to Australia.

There were no bulk shipments whatever, and cased exports were at a minimum.

The following table shows principal exports of petroleum and petroleum products from New York during the last three weeks (all figures in gallons unless otherwise noted):

	Nov. 9	Nov. 2	Oct. 26
Gasoline:			
Bulk	.....	2,785,095	5,080,742
Cases	336,990	3,352,500	1,634,000
Kerosene:			
Bulk	.....	3,100,000	3,429,460
Cases	449,930	3,282,500	2,680,570
Gas oil:			
Bulk	.....	.....	7,630,918
Lubricating oil:			
Bulk	.....	.....	1,837,351
Barrels	337,250	697,150	854,200
Cases	74,140	55,550	224,670
Lubricating grease:			
Barrels (lbs.)	.....	561,600	321,750
Paraffin wax:			
Bags (lbs.)	356,400	609,620	441,540
Barrels (lbs.)	483,075	1,812,125	826,975
Petroleum asphalt:			
Barrels (tons)	2,623	237	.....

The foregoing figures include all shipments of 500 bbls., 1,000 cases, or more.

Oil Tanker Market and Movement

The oil tanker charter market during the past week was quiet, but rates were a little better. The bottom seems to have been reached for the present. Probably the fixing of several vessels to carry west Texas crude was a beneficial factor, as it took up a number of slack vessels. Although no rates have been published for this route, it is understood Corpus Christi comes within the Gulf division so far as charter rates are concerned, and therefore the freight from that port to New York, for instance, would be the same as from Houston or Port Arthur, although the distance is slightly greater.

A tanker was fixed for the Venezuela-Atlantic Coast route for 20 cents a barrel. This compares with a report low recently of 18 cents.

New tanker charters reported during the past week are as follows:

Tanker Svolder, clean, Gulf to United Kingdom-Continent, November loading, 16 shillings 6 pence, north of Hatteras, 13 shillings 6 pence.

Tanker Mantilla, 5,500 tons net, heavy crude oil, New York to Amsterdam, November loading, $3.50 per ton.

Tanker W. F. Burdell, Curacao, crude oil, November loading, to north of Hatteras, 20 cents.

Tanker Manatawney, California, December-January, to United Kingdom-Continent, 25 shillings one and 26 shillings two ports.

North Anglia, 1 shilling base, November-December loading, Gulf to Brazil, 140,000 cases gasoline or kerosene.

Tanker Elisha Walker, Curacao to New York, November loading, 21 cents a barrel.

To Build Five Tankers

Harland & Wolff, Ltd., have received from Andrew Weir & Co., of London, acting for the Lago Shipping Co., an order for five oil tankers similar to six recently built at Belfast, Ireland, the last of which was delivered September 30. The new vessels will be especially designed for carrying petroleum in bulk and their principal dimensions will be: Length, 315 feet; breadth, 50 feet; and tonnage, about 2,360 gross. They will be propelled by twin-screw triple-expansion engines developing 1,100 initial horsepower, obtaining steam from two cylindrical single-ended boilers. They will be of shallow draft in order to navigate in Maracaibo Lake and will have a capacity for carrying about 25,000 bbls. of petroleum each per trip.

The tanker movement of crude and refined petroleum to the Atlantic seaboard was heavy during the week ended November 9, totaling 4,560,000 bbls., a daily average of 652,000 bbls. This compares with a total of 3,935,000 bbls., or 562,000 bbls. daily, the preceding week.

Receipts from the Gulf Coast were 2,671,000 bbls., or 382,000 bbls. daily, against 2,547,000 bbls., or 364,000 daily, the preceding week.

Receipts from California continued at a high rate, being 750,000 bbls., or 107,000 daily, compared with 395,000, or 56,000 daily, for the week ended November 2.

Imports for the week ended November 9 are estimated at 1,139,000 bbls., a daily average of 163,000 bbls. This compares with 993,000 bbls., or 142,000 a day, for the preceding week.

South America made the largest contribution in the import column, amounting to 715,000 bbls. for the week, a daily average of 102,000 bbls.

Mexico contributed a total of 424,000 bbls., or a daily average of approximately 161,000 bbls.

Daily Average Receipts

The following table shows estimated daily average receipts for crude and refined oil by water at Atlantic Coast ports for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week ended—		
	Nov. 9	Nov. 2	Oct. 26
Gulf Coast	382,000	364,000	414,000
Pacific Coast	107,000	56,000	119,000
Mexico	61,000	38,000	54,000
South America	102,000	104,000	53,000
Totals	652,000	562,000	640,000

Daily Averages by Months

1927—	Gulf	Pacific	Mexico	S. A.	Total
Oct.	314,000	98,000	38,000	91,000	541,000
Sept.	336,000	97,000	69,000	99,000	601,000
Aug.	397,000	90,000	80,000	78,000	645,000
July	406,000	83,000	78,000	49,000	616,000
June	378,000	118,000	68,000	47,000	611,000
May	332,000	58,000	91,000	53,000	534,000
Apr.	388,000	93,000	69,000	61,000	611,000
Mar.	454,000	103,000	36,000	81,000	565,000
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926—					
Dec.	363,000	57,000	49,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

PENNSYLVANIA MARKET

OIL CITY, Pa., Nov. 12.—Gasoline was very slow during the past week in the Pennsylvania refined district. Demand was very small. The main reason for the change in conditions has been the weather which was not at all suitable for motoring. Kerosene was also a little weaker with demand off. This is a seasonal change. Fall plowing is over and the winter fuel market is not yet opened. Fuel oil is also a drug on the market. Neutrals are weaker than they have been. Cylinder stocks and wax are in the same condition as a week ago.

REFINING AND MARKETING

Petroleum Securities To Enter Marketing Along Pacific Coast

LOS ANGELES, Calif., Nov. 12.—The most important development in California from a marketing standpoint during the past week was the announcement of E. L. Doheny that the Petroleum Securities was formulating plans preliminary to the entrance of this company into the retail service station trade at strategic points along the Pacific Coast. The Petroleum Securities entered the retail trade in southern California several months ago simultaneous with a temporary suspension of expansion work by the Pan American Petroleum Co. It is interesting to note in this connection that the Pan American Securities own most of these service station sites in fee. The stations of both companies are identical in appearance except for the distinguishing name along each side just below the roof.

The Petroleum Securities recently acquired a 176-acre favorable water front location at Richmond, a small town just outside of Oakland across the bay from San Francisco and $600,000 will be expended immediately in the construction of storage tanks, pipe racks, a barrel and drum plant, casing plant, wharves, warehouse facilities and other equipment necessary to round out a complete distributing plant. Up to the present time distribution of Pan gas has been limited to the territory south of Santa Barbara but upon completion of the work just undertaken the company will take another step forward in its ambitious plans to become a prominent factor in the Pacific Coast retail trade. The importance of the Pan American's latest move lies in the fact that this company will be less susceptible to local price changes and therefore free of any possible discrimination resulting from competitive conditions. It will probably be about six or eight months before actual distribution of Pan gas gets under way in northern California although past performances indicate that the company will not lose any time.

Another very important development on the Pacific Coast is the marketing agreement entered into by the Union Oil Co. and Atlantic Refining Co. for a mutual exploitation of Australian markets through the medium of a new company to be organized for this specific purpose, the stock of which will be owned by each concern in equal proportions. It is understood that the products demanded by this new market will be supplied from the Union's California refinery although steps will undoubtedly be taken in the course of time to erect a modern plant probably at Sydney. A satisfactory market already exists for both fuel and gasoline and it would not be surprising if steps were taken in the very near future to take advantage of present conditions. This may either be done by taking over one of the old suspended refineries and adding modern equipment or by laying down an entirely new plant. Japan can take care of any surplus fuel oil production while China offers a very satisfactory market for kerosene.

The Richfield Oil Co. was low bidder on the Shipping Board's requirements for the next 12 months and consequently was awarded a contract calling for 2,750,000 bbls. of fuel at 78½ cents per barrel and 750,000 bbls. of bunker fuel at 83 cents per barrel. The Richfield's quotation on the cargo lot is the same as that which prevailed on the expiring contract but the bunker price is 2½ cents greater.

AMERICAN RETURNED FROM JAPAN DESCRIBES REFINING PROGRESS THERE

By J. B. Waldo

CHICAGO, Nov. 12.—To live for months, the only white man in a Japanese city of 100,000 population was one of the interesting experiences of R. S. Watt, an American oil man, who has very recently returned to Chicago. Mr. Watt was engaged in installing modern refinery equipment in the refineries of the Ogura Oil Co. at Tokyo and of the Nippon Oil Co. at Niigata and had unusual opportunities to observe the Japanese oil industry as well as the life of the native inhabitants. Accompanied by Mrs. Watt he lived for the better part of a year at the latter city, an industrial center where many of the people previously had never seen a white person.

Speaking of the Japanese oil industry, Mr. Watt stated that although production is so limited in Japan that there is still a large importation of crude, the refining industry is growing rapidly, is being thoroughly modernized and that the import of refined products of all kinds is being reduced at a rapid rate. The principal refining companies are the Ogura and Nippon companies. The former has a daily capacity of 2,000 bbls. of crude at its Tokyo refinery and the Nippon company of 3,000 bbls. at is Niigata plant. Both of these refining companies have cracking plants, vacuum stills for lubricating oils and are turning out a larger volume of better oils. In the item of pale oils alone which were very generally imported, the native production is now so large that the imports of these oils are small.

The crude requirements of the Japanese oil industry are about 2,000,000 bbls. a year. A large part of this is imported from California. The Formosa Field produces a considerable quantity of a transparent amber crude which is rich in wax and makes a good cracking stock. There are several small producing fields in the main island, the product being a low cold test crude. The oil fields are well equipped and the leases are kept neatly—to quote Mr. Watt, "as neat as a pin." In the Nishigami Field, which was visited, there are four producing sands which are found at 1,500, 2,600 4,800 and 6,600 feet, respectively. The Niitsu Field was also visited. Here the oil is found in two sands at 2,000 and 3,000 feet. The Okata Field was not visited. There is some production on the Island of Sakhalin, acquired by Japan at the close of the World War, but of the quantity or quality of the oil produced little was learned.

Thirty-Five Refineries

There are about 35 refineries in Japan but a number of these are very small with a capacity of less than 100 bbls. of crude daily. Many of these older refineries are what an oil man would class as simply "junk," and it is a wonder how they manage to operate. It is very largely due to the low wages paid and the fact that they sell locally. These are bound to pass from the picture with the further improvement of the refining industry.

The leading refineries today in Japan are those of the Ogura company, at Tokyo and the three refineries of the Nippon company of which the largest is that at Niigata. The other two plants are located at Akita and Ssutini. The capacity of the four plants will prossibly reach 12,000 bbls. daily. The cost of the crude is high, about 9 yen per koku, which is about $4.50 per barrel. The price is due largely to the high tariff although the cost of transportation enters into it.

The chief products are gasoline, kerosene, gas, oil which the Japanese call "fish boat oil" as the chief use is for the vast Japanese fishing fleet; transformer oil, spindle oil, turbine oil, motor oils, fuel oil and asphalt. Japan has much water power and many electric plants. There is a very large demand for asphalt for road building. The Government is now building a 72-mile road from Tokyo to Osaka. There is no heavy traffic yet. Much of the transporting of freight is done with man power in the ancient fashion. There are about 40,000 autos in Japan of which the majority are Fords, although there are many light English cars which look like a toy. Regarding the development of the electrification of the industries, Japan produces more electric units per 1,000 inhabitants than any country except Switzerland.

Opposed to Gasoline Pumps

The Japanese do not take kindly to the gasoline pump. It is contrary to native custom and that is more powerful than even law in Japan. He prefers to buy his gasoline and other products in 5-gallon cans. About the only product shipped in tank cars is fuel oil. There is not to exceed a half dozen filling stations in all the country with its 2,500,000 people. In motor oils the seven and eight colors are used to a great extent. Foreign companies were getting all of the pale oil business but with improvements in the native plants the bulk of these oils are now refined in Japan.

Regarding further expansion of the refining industry in Japan Mr. Watt stated that neither the Nippon or the Ogura com-

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ARREST STATION OWNERS

CHICAGO, Nov. 12.—The city sealer has caused the arrest of the heads of five of the smaller oil companies operating service stations in Chicago for refusal to pay the fee for sealing a number of their measuring devices. The cases are set for trial on November 14. This is a continuation of the fight the owners of service stations have been making against what they claim amounts to double taxation. They are required to pay a fee for measuring devices.

The sealer includes in these measuring devices the pumps on the lubricating oil drums. The station owners claim these pumps are not used in measuring oils for sale to customers as they deliver the oil in measuring cans which are also sealed. They appealed to the city sealer who replied he would secure an opinion from the corporation counsel. The present action will result in securing an opinion from a judge in the Municipal Court.

TEXAS OIL MEN'S MEETING

The annual meeting and election of officers of the Texas Independent Oil Men's Association will be held at the Texas Hotel, Fort Worth, November 21 and 22. An interesting program for the two-day meeting is being prepared. R. N. Mullin is president of the association and L. A. Greene secretary and treasurer.

NEW ZEALAND GASOLINE TAX

A tax of 4 pence per imperial gallon has been imposed on gasoline by the New Zealand Parliament, effective November 1, according to a cable to the Department of Commerce from the Consul General at Wellington. Last year New Zealand imported 40,000,000 gallons of gasoline from the United States, 80 per cent of which was in cases.

NEW GASOLINE PLANTS IN CALIFORNIA AREA

Construction work on natural gasoline plants in California has slowed up during the past two or three months but the projected expansion work by the Standard Gasoline Co. at Ventura Avenue and the possibility of several plants being erected in the recently discovered field at Seacliff this phase of the industry will be going full blast again the near future.

The Riverside Gilmore Oil Co. has started construction work on a new absorption plant in the Santa Maria Field and it should be in operation within three months. In addition to handling the gas output of the Riverside Gilmore properties the new plant will take care of the natural gas production of the Palmer Union Oil Co. The Industrial Fuel Supply Co. has been rather active in southern California for several months, having recently augmented its pipe line facilities and put the finishing touches on a new compressor plant near Montebello. Upon completion of this work the company transferred its activities over to Seal Beach where the Fluor Construction Co. was awarded a $45,000 contract covering a new compressor plant which, according to the terms of the contract, must be ready for operation on or before December 10. This new plant is north of the Coast Highway between the coast road and the Newport line of the Pacific Electric Railroad's right of way.

MARKETING INSPECTION BY SKELLY OFFICIALS

Headed by W. G. Skelly, president of the company, a party of officials and departmental heads of the Skelly Oil Co. are making an inspection tour of the marketing properties of the company. The purpose of the trip is to make a survey of the company's trade territory with the view of possible future expansion. The party will return to Tulsa November 21.

In addition to Mr. Skelly, the party includes C. C. Herndon, Tulsa, vice president and counsel; F. A. Pielsticker, El Dorado, Kan., vice president in charge of refining division; F. T. Hopp, Tulsa, secretary and treasurer; G. A. R. Slocum, El Dorado, sales manager; W. T. Atkins, Kansas City, Mo., manager of station department, and Glenn Condon, Tulsa, director of public relations.

TO MARKET "SOCONY SPECIAL"

NEW YORK, Nov. 12.—The Standard Oil Co. of New York has completed arrangements for the marketing of its new gasoline to be known as "Socony Special." This gasoline is to sell at 3 cents above the regular grade of gasoline sold by the company. The new motor fuel is a product of the company's cracking processes, including the plants of the General Petroleum Co. in California and the Magnolia Petroleum Co. on the Gulf Coast. It is said that the gasoline is especially adapted for use in high compression engines.

MEETING OF EXECUTIVE CLUB

CHICAGO, Nov. 12.—The members of the Executives Club, consisting of the executives of the various state organizations of independent oil men, met today for their annual meeting. There were present H. H. Ragle, president of the Michigan association; James A. Gilmore, secretary of the American Oil Men's Association; Paul Hadlick, secretary of the Minnesota organization; George Allee, president of the Missouri association, and John Motter, secretary of the Kansas association.

Brief Items for Plant Operators

New Owners Plan To Enlarge Plant In North Louisiana

SHREVEPORT, La., Nov. 14.—Announcement was made today by J. W. Atkins, vice president and general manager of the Shreveport Producing & Refining Co. of ratification at a directors' meeting last week of the sale of the controlling interest in that company to the Shreveport El Dorado Pipe Line Co. and plans for the immediate enlargement of its refinery here to 10,000 bbls. daily capacity crude runs and 500 cars monthly of gasoline in addition to other products. Details of the transaction, by which the Shreveport El Dorado Pipe Line Co. comes into possession of 667,000 of the 1,000,000 shares of Shreveport Producing & Refining Co. stock outstanding, were not given out but part of the consideration is the doubling of the daily capacity of the refinery here by installation of another pipe still and necessary run-down tanks, pumps and other equipment.

D. H. Christman

Who has been appointed general superintendent of the Shreveport Oil & Refining Co. Mr. Christman has held a similar position with the Crystal Oil Refining Co.

Cracking plant equipment of the refinery, which will be able to handle the increased capacity from the skimming plant without installation of additional units, consists of two Dubbs units of 25,000 bbls. per month each and one Jenkins unit of 30,000 bbls. monthly capacity.

Christman Manager

There will be no change in management of the Shreveport Producing & Refining Co., save that D. H. Christman, for many years manager of the refining department of the Crystal Oil Refining Corp., joins the company as general superintendent of the refinery. K. E. Merren of Shreveport is president of the Shreveport El Dorado Pipe Line Co., the majority of whose stock is owned in Philadelphia, and B. H. Gray of Shreveport is vice president and general manager. C. D. Keene of Shreveport is president of the Shreveport Producing & Refining Co. J. W. Watkins is vice president and general manager.

Both the companies were organized by the late J. B. Atkins of Shreveport, but following his death a little over a year ago the Atkins estate disposed of all its interests in the Shreveport El Dorado Pipe Line Co., which since its organization four or five years ago, has delivered over $30,000,000 worth of Arkansas and north Louisiana crude to Shreveport refineries and at present is running an average of 15,000 bbls. daily to these plants.

ACTING SUPERINTENDENT

J. J. Thomas, assistant superintendent of the Crystal Oil Refining Co., Shreveport, La., has been appointed acting superintendent of the company's refinery to succeed D. H. Christman, who resigned effective November 11. Mr. Thomas has been connected with the Crystal organization for the past year and a half.

PLANT OPERATORS' MEETING

A plant operators meeting under the auspices of the Natural Gasoline Association of America will be held November 29, at Breckenridge, Tex. A general invitation to attend has been extended to all those connected with plant operations in that area. Dr. E. R. Lederer, vice president of the Texas Pacific Coal & Oil Co., of Fort Worth, is in charge of the program.

INDIAN REFINING ADDS PROCESS

CHICAGO, Nov. 12.—The Indian Refining Co. is adding to its facilities for the refining of lubricating oils a vacuum process and wax plant of its own design which it expects to have completed in about 60 days. The company has also placed orders for additional tank cars with a capacity of 4,500 gallons, each car being divided into three compatrments loading 1,500 gallons in each compartment. These cars are proving very popular with their trade. The company finds many of its customers cannot readily take in more than 1,500 gallons of a grade of oil at one delivery.

SEMINOLE GASOLINE PRODUCTION PASSES 700,000 GALLONS DAILY

The natural gasoline production of the Greater Seminole Field of Oklahoma continues to climb according to a check made of the operating plants the first of this week. The present daily output is now 760 000 gallons daily and the new plants including the enlargement programs at those already in operation should boost this production over the 800,000 gallon mark within a period of 30 days. The Seminole area now leads all other fields in production, its output being approximately 17 per cent of the total for the entire United States.

There has been a decline in the volume of casinghead gas available at several of the plants and this has been reflected in a decline in their output of natural gasoline. At the same time the gasoline content of the gas is increasing. Most of the pumping wells are showing a larger gas flow than had been expected and this gas has a gasoline content of from 6 to 10 gallons per 1,000 cubic feet. The gas lift operation in which the gas is recirculated to flow the wells is still a very large source of the natural gasoline output the gasoline being extracted from the gas by the compression or absorption method as it comes from the wells and then returned to the lease as dry gas for further recycling.

The new Little River Pool is still not a large manufacturer of natural gasoline. This is partially due to the fact that the crude oil production has been curtailed which has been reflected in the gas available. The Empire Gasoline Co. is the only manufacturer at the present time. This company has an agreement with the Indian Territory Illuminating Oil Co., one of the largest producers in the field, by which it takes the gas from its leases. The Empire company operates five of the so-called compressor plants on the Indian Territory leases in the Little River area. These plants furnish the gas at the desired pressure for flowing the wells. In the same operation the bulk of the natural gasoline in the gas is extracted by passing the gas at high pressure through condensers.

Little River Output

The natural gasoline from these five scattered units which are operated as one plant is pumped to one common shipping plant where it is treated and made ready for the market. When the gas lift is completed and the wells are operated on a pumping basis it is expected that the gas will be handled by one plant of the absorption type. The gas so far available in the Little River does not differ

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CHARLES E. DURKEE, CHAIRMAN

Charles E. Durkee, superintendent of the Augusta, Kans., refinery of the White Eagle Oil & Refining Co., has been appointed chairman of a committee representing the Western Petroleum Refiners Association, which will investigate fire hazards in connection with petroleum refining. Other members of the committee are Ray E. Miller, safety engineer of the Marland Refining Co., Elmo Murphy, safety engineer of the Mid-Continent Petroleum Corp., Don J. Wallace, safety director of the Mid-Continent Oil and Gas Association, and H. W. Camp, general superintendent of refineries, Empire Oil & Refining Co.

The committee will make an investigation relative to hazards which have developed as a result of the newer methods in refinery operation. Their recommendations will be made available to all members of the association.

NEW ABSORPTION PLANT IN PINE ISLAND AREA

SHREVEPORT, La., Nov. 12.—The Texas Company has put into operation its new absorption plant in the Pine Island district of Caddo Parish, using gas from the Trinity deep sand in connection with its recently installed gas lift system. The plant is built for 20,000,000 feet of gas daily capacity but at present is running only about 12,000,000 feet, gasoline recovery averaging a half gallon per 1,000 feet.

Dixie Oil Co. and Magnolia Petroleum Co. also have absorption plants running Pine Island Trinity gas and with addition of The Texas Company the waste of gas formerly blown into the air in producing some of these deep Pine Island wells will be considerably decreased, lessening the worries of the operators and the Louisiana Conservation Department to a corresponding degree, the latter agency having been much concerned over the waste for the past several months.

Under Louisiana law operators cannot be compelled to stop blowing combination gas and oil wells unless the gas wasted in producing oil exceeds the value of the oil, gas so wasted being given an arbitrary value of 3 cents per 1,000 feet. Pine Island Trinity oil at 40-42 gravity has a value such that although many million feet of gas were going into the air at one time its value at 3 cents per 1,000 feet was less than that of the oil and the commission could not do anything, nor could the operators help themselves much even though they were desirous of conserving the gas as much as possible to prolong the flowing life of their wells.

(Recent Patents on Page 165)

AMONG THE TECHNICAL MEN

Ralph N. Du Bois joined the staff of the Bureau of Standards in 1922, in which year he was graduated from the University of Michigan, which he entered in 1917. Mr. Du Bois is occupied in research in problems relating to internal combustion engines and is in charge of operations of the altitude laboratory of the Bureau of Standards.

—Photo by Underwood & Underwood.

Ralph N. Du Bois

His current work relates to investigation of the performance of aviation engines under supercharging conditions. This includes development of bomb test for fuel for detonating qualities and the investigation of lubrication of aviation engines under cold weather conditions.

Mr. Du Bois was born in Washington, D. C., May 3, 1898, and was educated in the public schools, being graduated from the Technical High School in 1916. He has received the degree of B.S.E. and is a service member of the Society of Automotive Engineers.

The Bureau of Standards has taken a leading part in the investigations relative to antiknock performance of motor fuels in internal combustion engines. Due to the advent of the high compression engines in automobile design, this research work has been especially important to the oil industry. The bureau at present is directing its efforts toward the perfection of testing equipment and methods which will be accepted as standard in the measurement of detonation in motor fuels.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Nov. 15		Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.05¾	.06	.05¾	.06	.05¾	.06
56-58 450 endpoint	.05¾		.05¾		.05¾	
58-60 450 endpoint	.05¾		.05¾		.05¾	
58-60 437 (U. S. Motor)	.06	.06¼	.06	.06¼	.06	.06¼
60-62 400 endpoint	.06½	.06⅝	.06½	.06⅝	.06½	.06⅝
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
68-70 360 endpoint	.07⅛	.07¼	.07⅛	.07¼	.07⅛	.07¼
64-66 437 endpoint (blend)	.06	.06¼	.06	.06¼	.06	.06¼
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.06¼	.06⅜	.06¼	.06⅜	.06¼	.06⅜
NORTH TEXAS—						
56-58 450 endpoint	.05¾		.05¾		.05¾	
58-60 450 endpoint	.05¾	.05⅞	.05¾	.05⅞	.05¾	.05⅞
58-60 437 endpoint (U. S. Motor)	.06	.06⅛	.06	.06⅛	.06	.06⅛
60-62 400 endpoint	.06½		.06⅜	.06½	.06⅜	.06½
64-66 390 endpoint	.06⅝		.06⅝		.06⅝	
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06¾	
68-70 360 endpoint	.07		.06⅞		.07¼	
64-66 437 endpoint (blend)	.06¼		.06¼		.06	
NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.06½		.06½		.06½	
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06½		.06½		.06½	
PENNSYLVANIA—						
52-54 Naphtha	.07⅜	.07½	.07⅜	.07½	.07⅜	.07½
54-56 Naphtha	.07¾	.08	.08	.08¼	.08	.08¼
58-60 Gasoline	.07¾	.08	.08	.08¼	.08	.08¼
60 Gasoline	.08½	.08¾	.08½	.08¾	.08½	.08¾
62 Gasoline	.09⅛	.09¼	.09⅛	.09¼	.09⅛	.09¼
64 Gasoline	.09¼	.09½	.09¼	.09½	.09¼	.09½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.08	.08½	.08	.08½	.08	.08½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.05⅞	.06	.05⅞	.06	.06	
56-58 450 endpoint	.05⅞	.06	.05⅞	.06	.05⅞	.06
58-60 437 endpoint (U. S. Motor)	.06	.06¼	.06	.06¼	.06	.06¼
60-62 400 endpoint	.06½	.06⅝	.06½	.06⅝	.06½	.06⅝
64-66 375 endpoint	.07	.07⅛	.07		.07	
68-70 360 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
64-66 437 endpoint (blend)	.06¼		.06¼		.06⅛	.06⅝

NATURAL GASOLINE

	Nov. 15		Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¾		.05⅞	.06	.06	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05¾		.05⅞		.06	.06⅛
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05⅝	.05¾		.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½		.05¾		.05¾	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05½	.05⅝	.05⅝	
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¾		.05⅞		.06	.06¼
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05¾		.05⅞		.06	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½	.05⅝	.05¾		.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½		.05¾		.05¾	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05½	.05⅝	.05½	.05⅝
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06		.06⅛		.06⅛	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅞		.06		.06	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05½		.05½	
CALIFORNIA—						
75-85, 375, 390 endpoint	.09	.09½	.09	.09½	.09	.09½
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79 9, 375 e.p., rec. 90%	.05¾		.05⅞	.06⅛	.06	.06⅛
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05¾		.05⅞		.06	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05½		.05¾		.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05½		.05¾		.05¾	
Grade C, 80-90, 375 e.p., rec. 78%	.05½		.05½	.05⅝	.05½	.05⅝

Note: All natural gasoline, except California, is noncorrosive.

BURNING OIL

	Nov. 15		Nov. 8		Nov. 1	
KANSAS—						
41-43 water white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04½	.04¾	.04⅝	.04¾	.04⅝	.04¾
42-44 water white Kerosene	.05	.05⅛	.05		.05	
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05	.05¼	.04¾	.05	.04¾	
NORTH TEXAS—						
41-43 water white Kerosene	.04⅝		.04⅝		.04⅝	
40-42 water white Kerosene	.04⅜	.04½	.04⅜	.04½	.04⅜	.04½
ARKANSAS—						
41-43 water white Kerosene	.05	.05¼	.04½	.04¾	.04½	
PENNSYLVANIA—						
43 Kerosene prime white	.06¼	.06½	.06¼	.06½	.06½	.06¾
45 Kerosene water white	.06½	.06¾	.06½	.06⅜	.06⅝	.06⅞
46 Kerosene water white	.06¾	.07	.06¾	.07	.07	.07¼
47 Kerosene water white	.07	.07¼	.07	.07¼	.07¼	.07½
300 Mineral Seal	.07¼	.07½	.07¼	.07½	.07¼	.07½
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.05½	.06	.05½	.06	.05¼	.06
Engine distillate, 43-45 445 endpoint	.07	.07¾	.07	.07¾	.07¼	.08
Engine distillate, 42-44 480 endpoint	.06¾	.07	.06¾	.07	.07	.07¼
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04½	.04¾	.04½	.04⅝	.04⅝	.04¾
42-44 water white Kerosene	.05		.05		.05	.05¼

FUEL OILS

	Nov. 15		Nov. 8		Nov. 1	
KANSAS—						
22-26 Fuel Oil	.82½	.87½	.82½	.87½	.85	.92½
18-22 Fuel Oil	.80	.82½	.80	.82½	.82½	.85
32-36 Gas Oil	.02⅝		.02⅝		.02⅝	
38-40 Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03⅜
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil	.72½	.75	.72½	.75	.72½	.75
18-22 Fuel Oil	.77½	.80	.77½	.80	.77½	.80
22-26 Fuel Oil	.80	.82½	.80	.82½	.80	.82½
24-26 Fuel Oil	.82½	.85	.82½	.85	.82½	.85
26-30 Fuel Oil	.87½		.87½		.87½	
28-30 Fuel Oil	.92½	.95	.92½	.95	.92½	.95
32-36 Gas Oil (dark)	.02½		.02½		.02½	
32-36 Gas Oil (straw overhead)	.02⅝		.02⅝		.02⅝	
36-38 Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
38-40 Straw Distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	.80	.82½	.80	.82½	.80	.82½
32-36 Gas Oil (straw)	.02¼	.02½	.02¼	.02½	.02¼	.02½
38-40 Straw Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
NORTH LOUISIANA—						
18-20 Fuel Oil	.90	1.00	1.05	1.10	1.05	1.10
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03¼
ARKANSAS—						
36-38 Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
32-36 Gas Oil (straw)	.03	.03¼	.03¼		.03¼	
16-20 Refinery Fuel Oil	.90	1.00	1.00	1.05	1.00	1.05
GULF COAST (South Texas)—						
Gas Oil	.03⅞	.04	.03⅞	.04	.04	
Fuel Oil	1.30	1.35	1.35	1.40	1.45	1.50
PENNSYLVANIA—						
30-34 Fuel Oil	.04¼	.04½	.04¼	.04½	.04¼	.04½
36-40 Fuel Oil	.04⅜	.04⅝	.04⅜	.04⅝	.04⅜	.04⅝
CALIFORNIA—						
33-36 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
27-32 Distillate	.02¾	.03¼	.02¾	.03¼	.02¾	.03¼
*15-20 Fuel Oil, Bunkers (at tide water)	1.00		1.00		1.00	
15-20 Fuel Oil (cargo lots)	.90		.90		.90	
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	.80	.85	.80	.85	.80	.85
22-26 Fuel Oil (sellers' cars) Group 3	.77½	.82½	.80	.82½	.80	.82½
18-22 (Group 3)	.75	.77½	.77½	.80	.77½	.80
16-20 Smackover	1.00	1.02½	1.00	1.02½	1.00	1.05
32-36 Gas Oil (zero)	.02⅝	.03⅛	.02⅝	.03	.02⅝	.03
32-36 Gas Oil (industrial)	.02½	.02⅝	.02½	.02⅝	.02½	.02⅝
36-38 Distillate	.03	.03⅛	.03	.03⅛	.03⅛	.03¼
38-40 Straw Distillate	.03⅛	.03⅜	.03⅛	.03¼	.03¼	.03⅜

*Bunkers.

LUBRICATING OIL AND WAX

	Nov. 15		Nov. 8		Nov. 1	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
100 vis., 3 color, 20-25 cold test	.06	.06¼	.06	.06¼	.06	.06¼
150 vis., 3 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.08	.08¼	.08	.08¼	.08	.08¼
180 vis., 3 color, 23-28 cold test	.09⅜	.10	.09¾	.10	.09¾	.10
180 vis., 4 color, 23-28 cold test	.09¼	.09¾	.09½	.09¾	.09½	.09¾
180 vis., 5 color, 23-28 cold test	.09½	.09½	.09¼	.09½	.09¼	.09½
200 vis., 3 color, 23-28 cold test	.09½	.10½	.10	.10½	.10	.10½
200 vis., 4 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.09¼	.10	.09⅝	.10	.09⅝	.10
240 vis., 3 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
240 vis., 4 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
280 vis., 3 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
280 vis., 5 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
Cylinder Stocks:						
600, steam refined, light green	.08	.09½	.07	.09	.07	.09
600, steam refined, dark green	.07	.07½	.05	.06	.05	.06
190-200 vis. @ 210 Bright Stock	.30	.32	.31	.33	.31	.33
150-160 vis. @ 210 Bright Stock	.24	.25	.25	.26	.25	.26
Waxes:						
124-126 White Crude Scale Wax	.02⅝		.02⅝	.02¾	.02⅝	.02¾
PENNSYLVANIA—						
34 Neutral	.07½	.08	.07½	.08	.07½	.08
34 Sundebloom	.08¾	.09	.08¾	.09	.08¾	.09
36 Miners' Neutral	.07¾	.08	.07¾	.08	.07¾	.08
150, 3 color	.27¼	.27¾	.27¼	.27¾	.27¼	.27¾
180, 3 color	.31	.31½	.31	.31½	.31	.31½
200, 3 color	.32½	.33	.32½	.33	.32½	.33
220, 3 color	.36	.36½	.36	.36½	.36	.36½
600, steam refined	.10¼	.10½	.10¼	.10½	.10¼	.10½
635, steam refined	.11	.11½	.11	.11½	.11	.11½
650, steam refined	.12	.12½	.12	.12½	.12	.12½
600, Pennsylvania flash	.17	.17½	.17	.17½	.17	.17½
*550, E filtered	.15¾	.16	.15¾	.16	.17¼	.18
*600, E filtered	.17	.17½	.17	.17½	.18½	.19
600, E filtered	.16	.16½	.16	.16½	.16½	.17
600, D filtered	.25½	.26	.25½	.26	.25½	.26
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.29	.30	.30½	.31½	.32½	.33½
†122-124 White Crude Scale Wax	.03	.03½	.03	.03½	.03	.03¼
†122-124 White Crude Scale Wax	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06	.06½	.07	.07½	.07	.07½
No. 3 color, 200 vis., pale oil	.08½	.09	.09½	.10	.09½	.10
No. 3 color, 300 vis., pale oil	.09½	.10½	.10½	.11½	.10½	.11½
No. 3½ color, 500 vis., pale oil	.11½	.12	.12½	.13	.12½	.13
No. 4 color, 750 vis., pale oil	.14½	.15	.15½	.16	.15½	.16
No. 5 to 6 color, 200 vis., red oil	.07	.07½	.08	.08½	.08	.08½
No. 5 to 6 color, 300 vis., red oil	.08½	.09	.09½	.10	.09½	.10
No. 5 to 6 color, 500 vis., red oil	.09½	.10	.10½	.11	.10½	.11
No. 5 to 6 color, 750 vis., red oil	.12½	.13	.13½	.14	.13½	.14
No. 2 color, 200 vis., pale filtered	.11½	.13	.12¾	.14	.12¾	.14
No. 2 color, 300 vis., pale filtered	.12	.13	.14	.14½	.14	.14½
No. 2½ color, 500 vis., pale filtered	.12¼	.13	.15½	.16½	.15½	.16½
No. 2½ color, 750 vis., pale filtered	.17	.18	.20	.20½	.20	.20½
CALIFORNIA—						
130 vis., 2½-3 color	.09	.10	.09	.10	.09	.10

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

200 vis., 2½-3 color	.10	.10½	.10	.10½	.10	.10½
300 vis., 3 -3½ color	.10½	.11	.10½	.11	.10½	.11
350 vis., 3½-4 color	.11	.12	.11	.12	.11	.12
400 vis., 3½-4 color	.13	.14	.13	.14	.13	.14
Red Neutral:						
200 vis., 4½-5 color	.08½	.09	.08½	.09	.08½	.09
300 vis., 5 -6 color	.09	.09½	.09	.09½	.09	.09½
400 vis., 5 -6 color	.11	.11½	.11	.11½	.11	.11½
500 vis., 4½-5 color	.11¼	.12	.11¼	.12	.11¼	.12
500 vis., 5 -6½ color	.11	.11½	.11	.11½	.11	.11½
600 vis., 6 plus color	.12	.12½	.12	.12½	.12	.12½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Nov. 15		Nov. 8		Nov. 1	
Gasoline, U. S. Motor, 58-60 437	.08	.08¼	.08	.08¼	.08	.08¼
Kerosene, water white, 41-43	.07½		.07½		.07½	
*Fuel Oil, bunker "C," 14-16, per bbl.	1.45		1.45		1.45	
*Fuel Oil, Diesel, 28-30, per bbl.	2.10		2.10		2.10	
Gas Oil, 28 plus	.05½		.05½		.05½	
25 pale Paraffin Oil	.12		.12		.12	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.11½		.11½		.11½	
250 red Paraffin Oil	.10½		.10½		.10½	
225 red Paraffin Oil	.10		.10		.10	
200 red Paraffin Oil	.09½		.09½		.09½	
Refined Wax:						
120-122 a.m.p., per lb.	.04		.04		.04	
125-127 a.m.p., per lb.	.04¼		.04¼		.04¼	
130-132 a.m.p., per lb.	.05		.05		.05	
135-137 a.m.p., per lb.	.05¾		.05¾		.05¾	
Petrolatum, in bbls., carload lots, per lb.:						
Dark green	.01⅞		.01⅞		.01⅞	
Amber	.03⅜		.03⅜		.03⅜	
Extra amber	.03¾		.03¾		.03¾	
Cream	.06		.06		.06	
Lily white	.07½		.07½		.07½	
Snow white	.08½		.08½		.08½	

*Lighterage 6.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Nov. 15	Nov. 8	Nov. 1
Gasoline, U. S. Motor, 58-60 437, in cases	.2390	.2390	.2390
Kerosene, standard white, in cases	.1715	.1715	.1715
Kerosene, water white, in cases	.1815	.1815	.1815
600 steam refined cylinder stock, in bbls.	.17	.17	.17
635 steam refined	.19	.19	.19
650 steam refined	.20	.20	.20
600 Pennsylvania flash	.23	.23	.23
630 Pennsylvania flash	.35	.35	.35
600 Warren E	.25	.25	.25
600 Oil City E	.24	.24	.24
Light 135 Bright Stock	.40	.40	.40
Dark 135 Bright Stock	.38	.38	.38

LOS ANGELES EXPORT PRICES

	Nov. 15		Nov. 8		Nov. 1	
Kerosene, water white	.04½	.04¾	.04½	.04¾	.04¼	.04¾
U. S. Motor Gasoline, 53-55 437 e.p.	.05¾	.06	.05¾	.06	.06	.06¼

CALIFORNIA CRUDE PRICES

Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)*

Gravity—	Fullerton, Seal Beach, Long Beach, Huntington Beach, Richfield, Rosecrans-Dom'guez, Torrance-Inglewood 1	Whittier, La Habra, Montebello 2	Kern River, Newhall-McKittrick, Midway-Sunset, Elk Hills, Lost Hills, Beiridge, Buena Vista Hills, Coyote 3	Santa Fe Springs 4	Coalinga 5	6	Wheeler Ridge 7	Santa Maria, Ventura, Orcutt, Salt Lake 8
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.85	.85	.75	.85	....	.75	.75	.85
16°	.85	.85	.75	.85	....	.75	.75	.85
17°	.85	.85	.75	.85	....	.75	.75	.85
18°	.85	.85	.75	.85	....	.75	.75	.85
19°	.85	.85	.75	.85	....	.75	.75	.85
20°	.85	.85	.77	.85	....	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.85	.78	.78	.85
23°	.88	.85	.83	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.83	.82	.87
27°	.94	.88	.91	.92	.88	.85	.83	.88
28°	.96	.89	.93	.93	.89	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.03	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.12	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Domingues, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 33 degrees; Lost Hills and Beiridge, 14 to 34 degrees.

Column 8—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees, Ventura and Orcutt, 14 to 39 degrees. Posted only by Union Oil Co.

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Gray County (Texas Panhandle) 4	Crane, Upton, Pecos, Crockett Counties (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset (South Central Texas) 8
Below 24	....	.90	....	....	....	....	....	....
24 and above	....	1.16	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.15	....
25 to 25.9	....	....	....	....	....	....	1.17	....
Below 26	....	....	....	....	.60	....	....	....
26 to 26.9	....	....	....	....	.60	....	1.19	....
27 to 27.9	....	....	....	....	.60	....	1.21	....
Below 28	(*)	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.60	....	1.23	....
29 to 29.9	1.14	....	1.04	.82	.60	1.14	1.25	....
30 to 30.9	1.16	....	1.06	.84	.60	1.16	1.27	....
31 to 31.9	1.18	....	1.08	.86	.60	1.18	1.29	....
32 to 32.9	1.20	....	1.10	.88	.60	1.20	1.31	1.05
33 to 33.9	1.22	....	.....	.90	.60	1.22	1.33	1.07
34 to 34.9	1.24	....	.....	.92	.60	1.24	1.35	1.09
35 to 35.9	1.26	....	.....	.94	.60	1.26	1.37	1.11
36 to 36.9	1.28	....	.....	.96	.60	1.28	....	1.13
37 to 37.9	1.30	....	.....	.98	....	1.30	....	1.15
38 to 38.9	1.32	....	.....	1.00	....	....	....	1.17
39 to 39.9	1.34	....	.....	1.02	....	....	....	....
40 to 40.9	1.36	....	.....	1.04	....	....	....	....
41 to 41.9	1.38	....	.....	1.06	....	....	....	....
42 to 42.9	1.40	....	.....	1.08	....	....	....	....
43 to 43.9	1.42	....	.....	1.10	....	....	....	....
44 to 44.9	1.44	....	.....	1.12	....	....	....	....
45 to 45.9	1.46	....	.....	....	....	....	....	....
46 to 46.9	1.48	....	.....	....	....	....	....	....
47 to 47.9	1.50	....	.....	....	....	....	....	....
48 to 48.9	1.52	....	.....	....	....	....	....	....
49 to 49.9	1.54	....	.....	....	....	....	....	....
50 to 50.9	1.56	....	.....	....	....	....	....	....
51 to 51.9	1.56	....	.....	....	....	....	....	....
52 and above	1.60	....	.....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted new schedule September 14, making price below 30 gravity $1.05 per barrel, with 2 cents increase per degree higher in gravity, taking 30-30.9 gravity at $1.16 as basis, with a top price of $1.60 for 52 and above.

Oklahoma: Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., March 12; Carter Oil Co., The Texas Company, March 14.

North Central Texas—[Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only), Currie, Nocona, Moran and Corsicana light]: Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, Humble Oil & Refining Co., March 14.

Kansas—Prairie, Sinclair, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, De Soto, Haynesville, Homer and El Dorado only]: Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, Gulf Pipe Line Co., March 14.

Column 2—On September 17, Louisiana Oil & Refining Co. On September 20, Standard Oil Co. of Louisiana, Magnolia Petroleum Co., Gulf Refning Co., and Atlantic Producing Co. September 23, The Texas Company.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14. On August 23 Magnolia Petroleum Co. posted flat 75 cents.

Column 5—Humble Oil & Refining Co., August 23; Kay County Gas Co., Magnolia Petroleum Co., and Gulf Pipe Line Co., August 24.

Column 6—Midwest Refining Co., March 12. All crude over 27 gravity, $1.30 per barrel.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posts 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

*Prices for crude below 28 gravity; Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree, with exception of Humble Oil & Refining Co., which pays $1.12 for crude below 28 degrees gravity.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927)....$1.00
Other fields.....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County .....$ .75
*Hutchinson County ..... .75
*Wheeler County ..... .75
Gray County.....See gravity table

*Humble Oil & Refining Co.
Magnolia Petroleum Co., Gulf Pipe Line Co., and Kay County Gas Co., August 23.

WEST TEXAS

*Iatan.....Same as North Texas
Crane-Upton-Crockett.....See gravity table
**Glasscock .....$ .80

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.05 for Howard County crude, effective May 21.
**Magnolia Petroleum Co., Oct. 24.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (March 17).....$1.00
Bellevue (Feb. 24, 1927)..... 1.25
Urania (Sept. 15, 1927)..... .90
East El Dorado (Sept. 20)..... .90
Other fields.....See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co., Gulf Refining Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

‡Grade A (March 14).....$1.30
Grade B.....See gravity table
*Jennings, La. (March 14).....$1.05
†Saratoga, Batson, Dayton (March 14, 1927) 1.20
‡Markham (March 14)..... 1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. ‖The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5).....$1.00
†Mirando (March 14)..... 1.00
Rockdale-Minerva (April 15):
38-38.9 gravity 1.27
39-39.9 gravity 1.29
40 and above 1.31
*Thrall .....
Callihan (May 15)..... 1.75
Lytton Springs (Lockhart See gravity table
Somerset ..... See gravity table

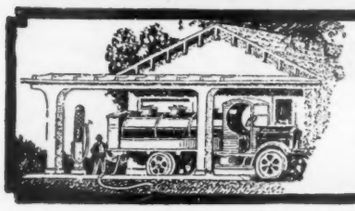
*Posted by Magnolia Petroleum Co. Thrall prices same as north central Texas less 19¼ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
Effective March 14)

Rock Creek, Wyo. (March 12).....$1.25
Salt Creek ..... See gravity table
Big Muddy (March 12).....$1.25
Mule Creek (May 1)..... 1.10
Grass Creek, heavy ..... .90
Grass Creek, light 1.33
Elk Basin (March 12)..... 1.33
Lance Creek (March 12)..... 1.33
Poison Spider 1.00
Notches ..... .85
Rex Lake (February 22)..... 1.10
Osage 1.33
Lost Soldier (contract)..... .95
Greybull-Torchlight 1.33
Hamilton Dome ..... .85
Cat Creek (Mont.) 1.33
Sunburst (Mont.) 1.35

(Continued on Page 142)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Nov. 15.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Chicago dist. ..	16.0	18.0	2.0	12.0
Decatur, Ill. ..	10.5	12.5	2.0	12.1
E. St. Louis ...	15.1	17.35	2.0	11.2
Joliet	16.4	18.4	2.0	12.3
Peoria	12.2	12.2	2.0	12.1
Quincy	16.2	18.2	2.0	11.9
Davenport, Ia..	15.5	17.5	3.0	12.3
Des Moines ...	13.9	15.9	3.0	12.3
Keokuk	17.5	19.5	3.0	12.3
Sioux City	17.1	19.1	3.0	11.9
Duluth, Minn...	15.5	17.5	2.0	12.9
Minneapolis ...	14.0	14.0	2.0	12.9
Mankato	17.1	19.1	2.0	12.7
LaCross, Wis. .	17.2	19.2	2.0	13.0
Milwaukee	16.1	18.1	2.0	11.9
Madison	16.3	18.3	2.0	12.1
Detroit, Mich...	15.8	17.8	3.0	13.7
Grand Rapids...	14.0	16.0	3.0	13.6
Saginaw	17.9	19.9	3.0	13.8
Evansville, Ind.	17.0	19.0	3.0	13.0
Ft. Wayne	14.0	14.0	3.0	13.4
Indianapolis ...	14.2	15.2	3.0	12.2
South Bend ...	15.0	15.0	3.0	13.4
Fargo, N. D. ..	15.0	17.0	2.0	14.9
Huron, S. D....	19.5	21.5	4.0	13.9
Sioux Falls ...	15.0	17.0	4.0	13.4
*K. C., Mo. ...	14.9	16.9	3.0	10.6
*Springfield ...	16.8	18.8	3.0	11.5
*St. Louis	15.6	17.9	2.5	11.3
*St. Joseph ...	14.5	16.5	3.0	11.2
Wichita, Kans.	14.8	16.8	2.0	10.8
Bartlesville, Ok.	15.8	17.8	3.0	10.8

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	16.0	10.75
V. M. & P. naphtha	18.0	12.75
Cleaner's naphtha	18.0	13.75
Stanisol	19.0	.....

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANDOLIND FURNACE OIL

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 or more gallons	7.5

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline; 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district, the following quantity discount schedule is in effect on tank wagon deliveries of gasoline; 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
All Ohio points	17.0	19.0	3.0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.*

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Dallas, Tex. ...	14.0	17.0	3.0	11.0
Fort Worth ...	14.0	16.0	3.0	10.0
Houston	13.0	15.0	3.0	15.0
San Antonio ..	13.0	15.0	3.0	10.0
El Paso	14.0	16.0	3.0	16.0
Texarkana	15.0	18.0	3.0	12.0
Muskogee, Ok...	15.0	18.0	3.0	9.0
Okla. City. ...	13.0	14.0	3.0	9.0
Tulsa	13.0	14.0	3.0	9.0
Ft. Smith, Ark.	14.0	17.0	3.0	12.0
Little Rock ...	16.0	16.0	5.0	12.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1¼ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
*N. Orleans, La.	15 5	17 5	3.0	14 0
Baton Rouge ..	14.0	17.0	2.0	12.5
Alexandria	15.0	18.0	2.0	14.0
LaFayette	15.0	18.0	2.0	13.5
Lake Charles ..	15.5	18.5	2.0	14.0
Shreveport	15.5	18.5	2.0	13.0
Kn'xville, T'nn.	19.5	22.5	3.0	15.0
Memphis	16.5	16.5	3.0	14.0
Chattanooga ..	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	16.0	16.0	5.0	12.0

*Tax of 3 cents includes city tax of 1 cent.
*Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Atlanta, Ga. ...	16.0	18.0	4.0	15.5
Augusta	19.0	22.0	4.0	16.5
Macon	19.0	22.0	4.0	16.5
Savannah	17 0	19 0	4 0	14.5
Birm'h'm, Ala..	18.0	21.0	4.0	15.5
Mobile	17.0	20.0	4.0	15.0
Montgomery ...	19.0	22.0	5.0	16.5
Clarks'le, Miss..	17.0	20.0	4.0	12.5
Jackson	17.0	20.0	4.0	13.5
Natches	16.5	19.5	4.0	14.0
Gulfport	18.5	21.5	6.0	14.0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla..	18.0	21.0	5.0	14.0
Miami	20.0	23.0	5.0	15.5
Pensacola	19 0	22 0	5 0	14 0
Tampa	18 0	21.0	5.0	14 0
Lexington, Ky..	18.0	21.0	5.0	15.5
Covington, Ky..	19.0	22.0	5.0	15.5
Louisville	19.0	22.0	5.0	15.0

In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline. Kerosene prices in Georgia includes 1 cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Pittsburgh, Pa..	16.0	*22.0	...	14.0
Philadelphia ..	14.0	17.0	...	14.0
Scranton	16.0	*22.0	...	14.0
Allentown	16.0	*22.0	...	14.0
Altoona	16.0	*22.0	...	14.0
Erie	14.0	*18.0	...	14.0
Dover, Del. ..	19.0	22.0	3.0	14.0
Wilmington ...	19.0	22.0	3.0	14.0
Spring'd, Mass.	17.0	17.0	...	15.0
Worchester ...	17.0	17.0	...	15.0
Boston	17.0	17.0	...	15.0
Providence, R.I.	19.0	19.0	2.0	15.0
Hartford, Conn.	21.0	22.0	2.0	15.0
New Haven ...	21.0	22.0	2.0	16.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Albany, N. Y. .	17.0	19.0	...	15.0
*New York ...	17.0	19.0	...	15.0
Buffalo	17.0	19.0	...	14.0
Rochester	13.0	16.0	...	14.0
Syracuse	17.0	19.0	...	15.0
Boston, Mass. .	17.0	19.0	...	15.0
Augusta, Me. ..	20.0	22.0	3.0	15.0
M'nch't'r, N.H..	18.0	22.0	3.0	15.0
Burlington, Vt..	20.0	22.0	3.0	15.0

*Price in steel barrels.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
San Francisco .	17.0	21.9	3.0	15.5
Pueblo	18.0	18.0	3.0	15.5
Los Angeles ...	16.5	20.5	3.0	15.5
Reno, Nav. ...	22.0	26.0	4.0	19.0
Portland, Ore. .	17.5	21.5	3.0	16.5
Seattle, Wash..	16.5	20.5	3.0	16.5
Tacoma	16.5	20.5	3.0	16.5
Spokane	20.5	24.5	3.0	20.5
Phoenix, Ariz..	22.0	26.0	3.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Atlantic City ..	18.0	20.0	2.0	14.0
Newark, N. J. .	18.0	20.0	2.0	14.0
Annapolis, Md..	20.0	23.0	4.0	12.0
Baltimore	20.0	23.0	4.0	10.0
Cumberland ...	20.0	23.0	4.0	14.0
Washing.on ...	18.0	21.0	2.0	12.0
Danville, Va. ..	20.5	....	4.5	14.0
Norfolk	20.5	23.5	4.5	12.0
Petersburg	20.5	23.5	4.5	14.0
Roanoke	20.5	23.5	4.5	14.0
Richmond	18.5	21.5	4.5	14.0
Ch'rist'n, W.Va.	20.0	23.0	4.0	14.0
Keyser	20.0	....	4.0	14.0
Parkersburg ...	17.0	20.0	4.0	14.0
Wheeling	20.0	23.0	4.0	14.0
Charlotte, N. C.	20.0	23.0	4.0	14.0
Hickory	20.0	23.0	4.0	14.0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14.0
Charl'stn, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	20.0	5.0	14.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Omaha	14.25	16.25	2.0	12.25
McCook	14.75	14.75	2.0	11.50
Norfolk	16.75	18.75	2.0	12.75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13.00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Denver, Colo...	16.0	16.0	3.0	12.5
Pueblo	15.0	15.0	3.0	14.5
Grand Jnctn. ..	20.5	22.5	3.0	18.0
Casper, Wyo. ..	17.0	19.0	3.0	13.0
Cheyenne	18.0	20.0	3.0	14.5
Butte, Mont. ..	22.0	22.0	3.0	19.0
Helena	22.5	24.5	3.0	19.0
Salt Lake, Utah	21.0	23.0	3.5	17.0
Boise, Idaho ..	23.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0
Albu'que, N. M.	21.0	24.0	5.0	17.0

CRUDE CHANGES

October 24 — Magnolia Petroleum Co. posted a price of 80 cents per barrel on all grades of crude purchased by them and produced in Glasscock County and in Howard County, West Texas, in Section 136, Block 29, west and northwest of the railway survey.

TANKWAGON CHANGES

November 10—The Magnol'a Petroleum Co. reduced the gasoline tankwagon price to 13 cents and the station price to 14 cents in Tulsa, Okla.

CALIFORNIA MARKETS SHOWING LITTLE CHANGE

LOS ANGELES, Calif., Nov. 12 — There have been no important changes in the California oil market during the past week. The domestic demand for gasoline is holding up quite well and marketers are feeling more optimistic as to the ability to hold prices at present levels for some time. The so-called bootleg market in and around Los Angeles is hardly as uniform as six weeks or two months ago, but the posted price in almost every case still holds at 18½ cents including tax.

Gasoline for out of state delivery is showing an improved tone though prices remain unchanged. The streng.hening is due primarily to the fact that one company, which was offering gasoline in this market at as much as one-half cent below any other company's quotations, has succeeded in selling its output and has withdrawn from the market.

The recent rather drastic reductions in gasoline prices in the East have a certain depress'ng effect on the local market, especially as regards the export trade. Shipments were down somewhat from the previous week, most of the total petroleum products shipped being fuel oil. Demand for this product is strong with indications the future will continue good.

Natural gasoline is also showing slight improvement. There have recently been inquiries in the local market for large gallonage of natural gasoline, which if furnished from Southern California will still further improve the condition of this commodity. On the other hand, the prolific deep sand recently discovered at Signal Hill has made available a new large volume of rich gas and the production of natural gasoline plants in that field has increased enormously.

FUEL OIL PRICES LOWER IN SHREVEPORT SECTION

SHREVEPORT, La., Nov. 14.—Appearance of distress fuel oil during the week and a slow demand for the product in this territory is blamed for a weakening which sent prices from $1 to $1.05 to 90 cents to $1 per barrel, which appears to be bottom. Shippers will move as much from storage as they do from daily production.

U. S. Motor gasoline is unchanged at 6½ cents with all plants sold up at present rate of production but the demand is not sufficient to warrant increasing daily runs to stills.

Announcement of plans for doubling the capacity of the Shreveport Producing & Refining Co. plant to 10,000 bbls. daily crude runs had no untoward effect.

One plant reported an accumulated stock of 30,000 bbls. of gasoline but this was to be moved at once on contract of long standing. Kerosene at 5 to 5¼ cents is as scarce as ever but demand has not served to further advance the price beyond the quarter to three-eighths cent advance quoted last week. Gas oil was reported by one authority as somewhat stronger for the Arkansas product, which he quoted at 3 to 3¼ cents with sale of small quantities at 3¾ cents, moving 10 cars at the latter figure. In general, however, the price is unchanged from last week at 3 to 3¼ cents.

CRUDE OIL PRICES

(Continued from Page 141)

Artesia (March 12)	1.00
Hogback (N. Mex.) (March 14)	1.38

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective August 1)

Penna Grade Oil in New York Transit Line (New York)	$2.60
Bradford District Oil in National Transit Lines (Pennsylvania)	2.65
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	2.55
Penna Grade Oil in Eureka Pipe Line lines (Pennsylvania)	2.50
Penna Grade Oil in Buckeye Pipe Line lines (Ohio) (August 23)	2.35
Cabell Grade Oil in Eureka Pipe Line lines (West Virginia) (March 16) ...	1.40
Corning 35-cent grade oil in Buckeye Pipe Line Co.'s line (March 17)	1.35
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (March 17)	1.40
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (March 16)	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky)	.95
Keister (Pennsylvania)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.57
**Saginaw, Mich., Saginaw Sand (May 27)	2.05
Illinois	1.60
Indiana	1.48
Princeton	1.60
Plymouth	1.32
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.33
**Saginaw, Mich., Berea Sand (May 27)	1.95
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (March 16)..	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
†Clay County, Tennessee (Nov. 18) ...	2.25
§Oil Springs (Canada)	2.18
§Petrolia (Canada)	2.13

*Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

MEXICAN CRUDE

Note—Due to the fact that the exportation of Tuxpam light crude oil has become a negligible factor, prices will no longer be published.

*Panuco heavy (f.o.b. Mex. ports)	$1.18

*17.496 cents tax.

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Sinclair supplies the Dealer with several grades of Opaline, and with the Sinclair Recommendation Index which tells when each grade should be sold. The authorized Opaline Dealer asks the motorist his mileage, the Index tells the grade—the motorist drives away with the kind of lubrication which brings him back for more!

May we tell you about this successful method of selling *correct lubrication* with the full line of Opaline Motor Oils?

SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

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Oil Securities Showed Healthy Tone

Major Advances Limited to Few Specialties, but Fractional Gains Were Registered in Many Issues

The oils maintained a healthy note during the past week, with very few losses registered. The public confidence in the oils seems to be again asserting itself. The majority of gains were fractional, with the major advances limited to a few specialties which merited renewed confidence. The rapid increase of Independent Oil & Gas Co. and Panhandle Producing & Refining were the features of the week followed developments in both of those issues.

Independent announced two weeks ago the completion of an additional financing plan which was handled by Tulsa capitalists. This is a departure from ordinary practice, and during the past week the stock advanced to 27⅜; the highest in some time. There was sufficient strength in Independent to meet and absorb with little damage, the offerings of stock.

Panhandle Producing & Refining started advancing the day before the company's financial statement was issued. The stock arose to 16½ with plenty of outside buying through small commission houses. The low price of this stock is believed to have been responsible for making it attractive to many small investors. Increased earnings and expansion of producing properties mentioned below, were effective in this advance.

Sun Oil Co. this week declared a stock dividend of 3 per cent in common on common stock, in addition to the quarterly dividend cash of 25 cents per share payable December 15 to stockholders of record November 25.

Atlantic Refining-Union Oil

The announcement that Atlantic Refining Co. and the Union Oil Co. of California were joining in marketing operations in Australia has revived the report that Atlantic and Union were planning to consolidate.

The writer was told by a well known California banker some time ago that Atlantic Refining Co. had obtained an option on a controlling amount of stock of the Union Oil Co. of California, and from other quarters usually well informed, it was hinted that the Atlantic-Union merger was gradually becoming a reality.

The combination would be an ideal one in many respects for both concerns, it is believed, and it would not be surprising if an official announcement were made of a more definite nature within a few months.

Pennok Oil

The report of the Pennok Oil Corp. for the nine months ended September 30, 1927, shows net income of $56,094 after interest, depreciation, depletion and federal taxes, equivalent to 37 cents a share earned on 150,000 shares of no par stock. This compares with $277,633, or $1.85 a share, in the first nine months of 1926.

The net income for the September quarter was $12,995 after the above charges, equal to 8 cents a share, comparing with $7,930 or 5 cents a share in the preceding quarter and $97,691 or 65 cents a share in the third quarter of 1926.

The income account for the nine months ended September 30, 1927, compares as follows:

	1927	1926
Sales of oil	$306,324	$720,388
Expenses	186,156	241,934
Balance	$120,168	$478,454
Other income	63,897	89,177
Total income	$184,065	$567,631
Interest	19,680	29,136
Depreciation, depletion, and federal taxes	108,291	260,862
Net income	$ 56,094	$277,633
Dividends	112,500	225,000
Deficit	$ 56,406	*$ 52,633

*Surplus.

The balance sheet of the Pennok Oil Corp. as of September 30, 1927, follows:

Assets: Operated and unoperated leaseholds and physical equipment, $2,398,461; cash and collateral loans, $442,054; accounts and notes receivable, $25,492; inventories, $68,003; investments, $46,765; deferred charges, $9,835; total, $2,990,610.

Liabilities: Capital stock and surplus (represented by 150,000 no par shares), $713,867; accounts payable, $41,616; federal taxes payable during 1927, $9,466; gold notes, $378,200; depreciation and depletion reserve, $1,803,975; other reserves, $43,486; total, $2,990,610.

Beacon Oil

The Beacon Oil Co. reports for the quarter ended September 30, 1927, profit of $192,309, after interest and depreciation, but before federal taxes, comparing with profit of $181,886 in the preceding quarter and $652,835 in the third quarter of 1926.

The profit for the first nine months of 1927 totaled $432,338 before federal taxes, against $1,009,430 in the first nine months of the previous year. The stock outstanding consists of 24,126 shares of 7 per cent preferred and 704,000 shares of no par value common stock.

The income accouunt for the quarter ended September 30, 1927, compares as follows:

	1927	1926
Gross income	$1,875,763	$1,805,492
Expenses, interest & depreciation	1,683,454	1,152,567
Profit before federal taxes	$ 192,309	$ 652,835
Preferred dividends	45,236	45,243
Surplus	$ 147,073	$ 607,592

For the nine months ended September 30:

	1927	1926
Gross income	$5,116,358	$3,935,164
Expenses, interest & depreciation	4,684,020	2,925,734
Profit before federal taxes	$ 432,338	$1,009,430
Preferred dividends	135,709	135,719
Surplus	$ 296,629	$ 873,711

Mexican Seaboard Oil

The report of the Mexican Seaboard Oil Co. and the International Petroleum Co. and domestic subsidiaries for the quarter ended September 30, 1927, shows combined loss of $243,298 after interest, drilling expenses, etc., but before depletion. This compares with loss of $144,904 in the third quarter of 1926.

The combined loss for the first nine months of 1927, totaled $1,521,233 before depletion, against loss of $377,384 in the first nine months of the previous year.

The Cia International de Petroleo y Oleoductos, S. A., pipe line subsidiary of the Mexican Seaboard, reports for the quarter ended September 30, 1927, loss of $3,318 after expenses and amortization, comparing with loss of $6,919 in the preceding quarter and loss of $7,889 in the September quarter of 1926. Six months' loss amounted to $14,158 after the above charges, against profit of $46,030 in the first nine months of the preceding year.

The consolidated income account for the quarter ended September 30, 1927, compares as follows:

	1927	1926
Gross revenue	$688,974	$1,394,579
Expenses	590,287	722,118
Balance	$ 98,687	$ 672,461
Other income	168,347	24,573
Total income	$267,034	$ 697,034
Interest	98,926	61,250
Drilling expenses, reserves, etc	411,406	780,688
*Loss	$243,298	$ 144,904

For the nine months ended September 30:

	1927	1926
Gross revenue	$2,605,473	$4,313,616
Expenses	1,958,007	2,334,406
Balance	$ 647,466	$1,979,120
Other income	199,336	72,275
Total income	$ 846,802	$2,051,395
Interest	295,770	183,750
Drilling expenses, reserves, etc.	2,072,265	2,245,029
*Loss	$1,521,233	$ 377,384

*Before depletion.

Panhandle P. & R.

The consolidated balance sheet of the Panhandle Producing & Refining Co. as of September 30, 1927, follows:

Assets: Property account, less depreciation, depletion and amortization, $6,348,518; cash, $116,133; accounts and notes receivable, $485,143; inventories, $672,453; deferred charges, $59,693; total, $7,681,940.

Liabilities: 8 per cent cumulative preferred stock, $2,807,700; common stock (represented by 198,770 no par shares) $2,688,728; accounts payable, $22,089; notes payable, $532,475; trade acceptances, $74,277; accrued expenses, $217,668; reserve for preferred dividends, $954,618; other reserves, $38,743; special surplus (arising from preferred stock retirements) $326,211; capital and surplus applicable to minority interests, $19,431; total, $7,681,940.

Transcontinental Oil

The third quarter report of the Transcontinental Oil Co. is expected to show a deficit after reserves, against a profit of $215,000 in the first quarter and a $75,000 deficit in the second quarter.

Margay Oil Corp., eight months ended August 31, 1927, profit, $487,593 after charges, depreciation, depletion and cost of development and drilling but before federal taxes.

SAFETY MEETING AT HOMINY

A meeting of the Hominy, Okla., Safety Club will be held at Hominy, Okla. on the night of November 29. A large attendance of oil field employes is expected. C. D. Houston, of the Atlantic Oil Producing Co., is in charge of the program. The meetings of the local safety clubs in the different oil areas are being widely attended. Over 1,200 field men attended the recent meeting held at Borger, Texas.

BURBANK MAP

The map appearing upon page 32 of the November 10 issue of The Oil and Gas Journal was published through the courtesy of the American Association of Petroleum Geologists.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. Nov.14	Clos. Quot. Nov.7	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	29¼	29¾	37¼	27⅝	32⅞	24¾		
Atlantic Refining, com.	100	118	117	131½	107	128⅝	97	117½	95½
Barnsdall "A"	25	24¾	24⅝	35½	20¾	32½	23½	33½	18¾
California Petroleum, com.	25	23½	23¾	32⅞	20	38½	30⅞	34⅜	23⅜
Houston Oil	100	164	156½	175¾	60½	75	50¼	85	50
Independent Oil & Gas	..	26½	26	32⅝	17⅝	34	20¼	41¾	13½
Louisiana Oil	10	10⅜	11	18½	10½	19⅝	12	23⅜	13⅜
Maracaibo	..	12¼	12⅞	22⅝	12	27⅝	18⅜	35½	20⅜
Marland	..	36⅛	35½	58⅛	31	63⅜	41¼	60⅛	31⅝
Mid-Continent Petroleum	..	28⅞	29	39⅝	25½	41	25⅝	38	25⅝
National Supply	50	91	90	95¾	76	84⅞	55½	71	54⅝
Oil Well Supply	25	33	37	44⅝	31¼	36	30	38	33⅜
Pan American, B	50	49⅝	49⅝	66⅜	45½	72⅜	56⅛	83⅞	59½
Pan American, Western B	..	21¼	21	37⅞	16⅜	46	34	94⅝	37¼
Phillips Petroleum	..	42⅝	42¼	60¼	36½	54⅞	42⅛	47⅛	37¼
Producers & Refiners	50	28	28½	33⅞	16⅜	26	11	32½	12½
Pure Oil, com.	..	26	26¼	33½	25	31	25⅜	33⅜	22½
Royal Dutch, N. Y., sh.	13.40	47¼	45⅝	54½	44¼	57⅜	49⅜	57⅜	48¼
Shell Transport	10	42⅝	43¼	49	41½	48⅞	42	49	30⅜
Shell Union, com.	..	26⅞	26¼	31⅜	24⅝	30⅞	24	28⅜	21⅝
Simms Petroleum	10	19⅜	19¼	22⅝	14¼	25⅝	16½	28½	18¾
Sinclair Consolidated	..	15⅝	16⅛	22⅜	15½	24⅞	16⅜	24⅝	17
Skelly Oil	25	27⅞	27	37⅜	24½	37½	27	32½	21¾
Standard of California	25	56	56⅜	60⅜	50⅜	63½	54	67⅛	52½
Standard of New Jersey, com.	25	40½	40	41⅜	35½	46⅜	37½	47½	38⅜
Standard of New York	25	32½	32	34¼	29¾	47¼	30⅝	48⅝	40
Sun Oil Co.	..	32½	33¼	34⅞	30	41¼	30⅛	43⅜	38½
The Texas Company	25	52⅜	51⅞	58	45	58	48	55	43⅜
Texas Pacific Coal & Oil	10	13½	13⅞	18⅞	12	19½	12⅛	23¼	11
Tide Water Associated Oil	..	16⅜	17	19½	15⅜	21	17	..	..
Transcontinental	..	8⅝	8½	9⅝	3⅝	5½	3	5⅝	3½
Union Oil of California	25	45	45	56½	39⅝	53⅜	37¼	43⅝	38½
Union Tank, com.	100	120⅜	107½	120⅞	94	120⅜	84¼	‡134	118
White Eagle Oil & Refining	..	22⅞	22⅜	27½	21⅜	29⅜	26½	28⅝	25⅝
Standard Oils									
Anglo-American Oil	£1	18⅜	18⅜	21⅝	17½	19¾	16½	26⅜	17⅛
Borne Scrymser	25	56	56	69	49½	75	65	‡240	205
Buckeye Pipe Line	50	57½	56½	58	45	59½	42	72	63½
Chesebrough Manufacturing Co.	25	122	116	126	76½	81½	63	74	48¼
Continental	10	18¼	18½	22⅝	16¼	25⅞	10¼	31½	21⅞
Cumberland Pipe Line	100	95	94	‡137	90	137	102	156	128
Eureka Pipe Line	100	65⅝	62½	62½	47	43¾	43	96	61¼
Galena Signal, com.	100	7	6½	13½	7¼	32½	9⅝	68½	23½
Humble Oil & Refining Co.	25	64½	63⅜	65¼	54	99⅝	52	99	40⅝
Illinois Pipe Line	100	174½	176½	176½	123¾	144	131	154½	124
Imperial Oil	..	60⅛	61¾	64¾	37¾	39¾	32½	39¼	27¼
Indiana Pipe Line	50	89	82⅝	89	61	68	52¼	84	57⅝
International Petroleum Co.	10	33½	33½	34⅞	28¼	35¼	28⅝	25⅝	20½
National Transit Co.	12.50	22	20	22	13¼	30⅜	27½	25½	16½
New York Transit	100	38	37	37	31¼	61½	27¼	70	50
Northern Pipe Line	100	91	83	91	70	80½	64	88	67½
Ohio Oil Co.	25	62½	62¼	64¼	52	67¾	55⅜	75¼	60
Penn-Mex Fuel	25	35	36⅜	36⅞	12	24½	15	44	19
Prairie Oil & Gas	25	50	49	55½	45⅝	60¼	49	65½	45⅞
Prairie Pipe Line	100	189¼	178	189¼	132	137½	122½	129¾	105
Solar Refining Co.	100	180	180	‡201½	178	212	184½	259	200
South Penn Oil	25	38	39½	41½	34½	50	30	‡197	139
Southwest Pa. Line	100	74	74	77	55⅜	56	47½	84	50
Southern Pipe Line	50	38	23	‡27¼	18½	27	24	‡103	63
Standard of Indiana	25	§76¼	75¼	75⅝	64⅝	70½	60½	70⅝	69¼
Standard of Kansas	25	16¼	16	20⅞	15⅝	36½	16½	45	30
Standard of Kentucky	25	122⅜	121½	123½	111½	134⅝	108	137	114⅝
Standard of Nebraska	25	43	42⅝	49½	42	51¼	42	‡270	231
Standard of Ohio, com.	100	75	76	81½	72	362	192½	369	338
Swan & Finch, com.	25	19	19½	21	14½	21	18	27	12
Vacuum Oil	25	143	132	136½	95⅛	109⅝	94¼	109½	80½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	96⅞	95⅛	96½	86¼	95	82½	98¼	63½

*Bid, no sales. ‡Old stock. †New stock. §Ex-dividend.

Quotations furnished by W. J. Wollman & Co.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Nov. 14	62.78	Oct. 10	59.20	Sept. 5	60.60
Nov. 7	61.30	Oct. 3	60.97	Aug. 29	60.41
Oct. 31	59.98	Sept. 26	61.30	Aug. 22	61.58
Oct. 24	60.45	Sept. 19	60.83	Aug. 15	61.05
Oct. 17	59.22	Sept. 12	61.20	Aug. 8	61.33

CHICAGO DEMAND LIGHT, PRICES HOLD GOOD

(Continued from Page 134)

come yet. Many of the larger and active industrial plants have contracts for their average requirements and they are not so busy that they are buyers in the spot market for needs above the contract receipts. One of the local refinery managers canvassed the larger local and nearby industries carefully and he said that he was surprised at the number that assured him that their requirements were supplied for a considerable time ahead. Some of these contracts are expiring between now and the end of the year and the holders of these agreements express themselves as certain of their renewal. There are some inquiries out for contracts right now. The buyers in several instances want a contract based on the present price of crude with full allowance made for any decline and no advances to be considered. That they expect to get such contracts is doubtful. They go on the theory that they lose nothing by asking for all that they would like to have and they may find someone who is responsible and wants business badly enough to sign such an agreement. There is a good deal of what some call "Whistling while going through a graveyard," that is talk of the good prices at which they are making sales of fuel oil and of the prospects of an advance in the near future. Of course the oil industry is rather exceptional in the way that it can reverse conditions almost overnight, as some may remember if they have been in the industry long enough, but whether they are kidding themselves or trying to scare the buyer into placing orders at a price above what he has to pay the result is that some otherwise respected oil men are acquiring new diplomas for unreliability of statements.

Differences in Fuels

Of course there are some differences in fuel oils besides the gravity but there is a place where each and every oil is serviceable. Even oils high in sulphur content are considered as more desirable by certain users. Some plants have equipment which enables them to use the very low gravity oils, pre-heaters, large leads, stronger air and burners adopted and adjusted to the consumption of heavy grades of oil which cannot be used in plants not properly equipped. This fact sometimes results in widely divergent figures on what appears to be the same product on the surface of quotations alone. A 24-26 gravity oil with a low sulphur is worth more than a 24-26 gravity with specifications reading "less than 3 per cent sulphur." But this does not reconcile the statement made that no 24-26 fuel oil was obtainable at less than 85 cents in this city made by a sales manager with a bid over his own signature to a buyer at 75 cents and the bid was not the lowest at that. One refiner has quoted as low as 92½ cents for resale and possibly to the trade direct. Competitors say that it has 2 per cent sulphur and the refiner says that it has less than one per cent. As in gasoline the trade is being confused by differentials in freights and the like. The cost of Kentucky coal may be $1.50 a ton at the mines but the freight may add $3 a ton to the laid-down price. If there was a coal mine say 50 miles from Chicago or better still inside the Chicago switching district the coal man could sell his coal for a much lower price delivered than $4.50 a ton and still realize a much higher price than the Kentucky mine owner. The cost of a barrel of 24-26 fuel oil laid down in the Chicago district is about $1.75 a barrel. More for the freight than the oil, and some of the local refineries are selling freight and giving their nearby customers bargains in oil. Perhaps that explains why offers of 75 cents a barrel Group 3, do not always land orders. It is time for zero oils to command a premium and they do to some extent but there is not the demand that forces a really worth-while premium yet. So the higher cold test oils are being sold in competition with low cold test oils and this is sometimes a reason for the quotations made that seem below the market. Reliable dealers state they have been buying for several weeks for resale at 70 cents for the 18-22 gravity and at 72½ cents for the 24-26 gravity oils, less than one-half of one per cent sulphur and with a fairly low cold test.

Lubs Quiet

Lubricating oils are rather quiet here as is usually the case at this time of the year. The motor oil demand is said by some of the makers of high-grade lubs to be really good with them for the time of year, but generally it is put down as fair. Refiners report no change except that competition from Texas is keen right now and the local refiners are out for all the business they can book which results in some shading of prices.

Tank Wagon Changes

The tank wagon scale has not been generally changed but there have been quite a number of new points in the territory where it has been shaded locally. There is some complaint from the country districts that there are not as many cars on the road as last year and some of the southern tourist camps are having a much lighter business than a year ago. This may be due to the weather we have been having up north. The demand for antiknock gasoline is an important factor in the situation. So far ethyl gasoline is a first favorite and the competition is felt as is shown by the demand from independent dealers for something that will compete with ethyl. It has been stated that the popularity of that product is largely due to the clever advertising that is being done. At any rate the statements of the independent dealers are reflected in the reports made by the Standard Oil Co. of its sales of ethyl over its territory and by refiners who have licenses from the Ethyl Gasoline Co. to make and sell ethyl gasoline. Some of these refiners are hoping that the bars will be let down on the expiration of the exclusive contract held by the Standard Oil Co. of Indiana for its sale in its territory and that after March, 1929, other refiners will be able to deliver to the independent dealer who will be able to sell ethyl gasoline in the states covered by the Standard company. Much may happen before the expiration date. There are several makes of antiknock gasoline that are reported to have equal antiknock value with ethyl and if this is true the only trouble will be to convince the public of this fact. In all industries there is produced from time to time a product that is capable of rendering a more efficient service than any previously offered to the public. A large demand is waiting for the improved service and all that is necessary to create a large sale is to convince the buyers the new product is really better. The next step is for the production of rival lines that are just as good or even better and the once exclusive product is made common to all merchandisers of the line. There is no doubt that this result will follow in ethyl gasoline, the only question is when and by whom will the new product be placed on the market in sufficient quantities to really rival the present leader in popular favor in the way of an antiknock motor fuel. It is not unlikely that one or several such products are at present being refined but have not yet been introduced to the public on an extensive scale.

OKLAHOMA FIELDS

(Continued from Page 131)

No. 6 Perry, SE cor. SW NW Section 20-5-8. Barber Oil Co. has built the rig for No. 1 Mount, SE cor. NE NW Section 36-5-8.

LaSalle Oil Co. and others' No. 2 Copeland, SW cor. NE SW Section 28-5-5, has been completed for 40 bbls. at total depth of 2,363 feet. Homaokla Oil Co.'s No. 1 Milner, SE cor. NE NE Section 17-5-8, Allen Pool, made 432 bbls. from sand at 2,606-14 feet. No. 2 Milner, SW cor. NE SE Section 17-5-8, was completed for 390 bbls. in sand at 2,482-2,513 feet. W. R. Ramsey's No. 3 Webb, NE cor. NW SW Section 20-5-8, drilled to 2,513 feet and made 630 bbls. from a broken sand at 2,448-2,513 feet. Louisiana Oil Refining Corp.'s No. 4 Perry, SE cor. NW Section 20-5-8, had a broken sand at 2,496-2,525 feet and made 537 bbls. No. 3 Warfle, NW cor. NE Section 20-5-8, had broken sand at 2,554-2,625 feet and produced 727 bbls.

Stephens County

Magnolia Petroleum Co. is building the rig to deepen No. 2 A. Morgan, NE cor. Section 32-1-8w.

Mudge Oil Co.'s No. 1 March, SE cor. SW SE Section 15-1s-5w, has been abandoned at 1,737 feet. Pearce & Brown's No. 2 Prentiss, NE cor. NW NW Section 34-2s-6w, is dry and abandoned at 1,760 feet.

Tulsa County

Carl Dresser has the rig up for No. 1 Franklin, SW cor. SE Section 16-19-14. Enfisco Oil Co.'s No. 1 Berryhill, NW cor. SE SE Section 20-17-13, is making 8 bbls. from the Glenn sand at 1,714-24 feet.

Wagoner County

Elk Drilling Co.'s No. 3 Barnett, NW cor. NE Section 31-19-15, is drilling at 100 feet. Bu-Vi-Bar Petroleum Co.'s No. 1-A Tiger, NE cor. SE Section 30-18-15, is drilling at 1,220 feet. Sheldon Oil Co. has the machine on the location for No. 1 Wilson, SW cor. NW SW Section 1-18-17. Knox & Shouse's No. 1 Harris, C SW SE Section 12-17-16, is drilling at 500 feet. P. Boyle and others' No. 2 Woodward, NE cor. SW Section 32-18-16, is dry and abandoned at 960 feet.

Pottawatomie County

Atlantic Oil Producing Co. made location for No. 1 Hawk, NW cor. SW NW Section 18-9-5, Earlsboro Pool. Independent Oil & Gas Co. and Darby Petroleum Co. made location for No. 1 Wallace, NW cor. SW SW Section 14-7-4, Pearson area. The rig is being built for No. 1 Kelly, NE cor. NW SE Section 14-7-4.

Amerada Petroleum Corp.'s No. 3 Cowden, SE cor. SW SW Section 4-9-5, Earlsboro Pool, swabbed 165 bbls. initial from the Wilcox sand at 4,278-4,304 feet. No. 8 Cowden, NW cor. SW SW Section 4-9-5, was completed for 120 bbls. from the Wilcox sand at 4,453-4,547 feet after plugging back 7 feet. Magnolia Petroleum Co.'s No. 6 Cowden, SW cor. NW SW Section 4-9-5, made 64 bbls. from the Wilcox sand at 4,385-87 feet. The Texas Company's No. 4 Roger, SE cor. NE SE Section 5-9-5, shot the Wilcox sand at 4,460-67 feet and made 120 bbls. Magnolia Petroleum Co.'s No. 6 Bryant, SW cor. SE NW Section 9-9-5, had Wilcox sand at 4,250-67 feet and swabbed 265 bbls. Tidal Oil Co.'s No. 8 Watkins, SW cor. NE NW Section 9-9 5, made 145 bbls. from the Wilcox sand at 4,480-94 feet. Pure Oil Co.'s No. 1 Day, NE cor. SW Section 16-9-5, is dry and abandoned in the Wilcox sand at 4,302-03 feet. Atlantic, Independent and Darby's No. 1 Duff, SE cor. SW SW Section 10-7-4, Maud area, made 150 bbls. from the Hunton lime at 3,662-4,010 feet. Independent Oil & Gas Co. and Darby Petroleum Co.'s No. 2 Standridge, SW cor. NW SW Section 14-7-4, flowed 916 bbls. from the Hunton lime at 3,653-65 feet. Mid-Continent Petroleum Corp.'s No. 7 Doyle, NE cor. SE SW Section 19-7-4, Pearson Pool, swabbed 380 bbls. from the Hunton lime at 3,733-86 feet.

Seminole County

The Sinclair Oil & Gas Co. is building the rig for No. 2 Sango, SW cor. SE NE Section 2-9-5, Earlsboro Pool. Twin State Oil Co. has the rig on the ground for No. 4 Hearn, NW cor. NE SE Section 2-9-5. Sinclair Oil & Gas Co. has moved the rig out for No. 1 W. Taylor, SW cor. NE NE Section 10-8-6, Bowlegs Pool. Carter Oil Co. has dug the cellar for No. 4 Jones, NE cor. SE SE Section 11-8-6. Indian Territory Illuminating Oil Co. is rigging up the rotary tools for No. 9, Fay, SE cor. NW Section 13-8-6. Philmack Oil Co. and White Eagle Oil & Refining Co. has the cellar dug for No. 3 Davis, SE cor. SW SE Section 2-7-6, Little River Pool. The Prairie Oil & Gas Co. has built the rig for No. 1 Davis, NE cor. SE Section 21-10-7, east of the Seminole City Pool.

Mid-Continent Petroleum Corp.'s No. 3 Saloche, SW cor. SE SW Section 33-10-6, Searight Pool, made 1,200 bbls. from the Wilcox sand at 4,322-31 feet. Barnsdall Oil Co.'s No. 3 Ingram, SW cor. Section 1-9-5, Earlsboro Pool, made 100 bbls. on the pump producing from the Wilcox sand at 4,304-16 feet. No. 6 Ingram, SE cor. NW SW Section 1-9-5, had an initial production of 2,400 bbls. in the Wilcox sand at 4,334-44 feet. Sinclair Oil & Gas Co.'s No. 1 Sango, SE cor. NE Section 2-9-15, was completed for 2,935 bbls. in the Wilcox sand at 4,338-51 feet. The Texas Company's No. 4 Brown, NE cor. SW NW Section 10-9-5, swabbed 60 bbls. from the Wilcox sand at 4,465-99 feet.

The Texas Company's No. 3 Wilmott, SE cor. NE SE Section 10-9-5, is pumping 75 bbls. after losing the hole in an attempt to deepen below 3,565 feet. Empire Gas & Fuel Co.'s No. 4 Gross, NW cor. SW SE Section 25-9-6, Seminole Pool, found the Wilcox sand at 4,150 feet and after drilling in to 4,176 feet plugged back to 3,964 feet and swabbed 16 bbls. oil. Gypsy Oil Co.'s No. 1 Doser, SE cor. NE Section 7-8-6, west extension of Bowlegs Pool, had the Wilcox sand at 4,465-66 feet and flowed 1,120 bbls. partly pinched. Amerada Petroleum Corp.'s No. 1 Lawson, NW cor. SW Section 8-8-6, went into the Wilcox sand at 4,535 feet, drilled to 4,537 feet and was abandoned. The Prairie Oil & Gas Co.'s No. 4 Davis, SW cor. NW NW Section 13-9-5, made 880 bbls. from the Wilcox sand at 4,317-29 feet. Atlantic Oil Producing Co.'s No. 2 Jones, NE cor. SW SE Section 9-8-6, Bowlegs Pool, made 525 bbls. from the Wilcox sand at 4,266-71 feet.

Gypsy Oil Co.'s No. 1 Bradley, NE cor. SE SW Section 9-8-6, swabbed 132 bbls. from the Wilcox sand topped at 4,339 feet, drilled to 4,342 feet and plugged back to 4,333 feet. Pure Oil Co.'s No. 5 Strothers "D," NW cor. SE SW Section 11-8-6, has been abandoned at 4,484 feet in the Wilcox sand. Mid-Continent Petroleum Corp.'s No. 2 Smith, SE cor. SW Section 12-8-6, swabbed 100 bbls. from the Wilcox sand at 4,831-35 feet. Magnolia Petroleum Co.'s No. 2 Davis, NW cor. NE Section 13-8-6, produced 1,072 bbls. from the Wilcox sand at 4,202-06 feet. Pure Oil Co.'s No. 8 Strothers "D," NE cor. NW Section 14-8-6, lost the hole at 3,440 feet and was abandoned.

Pure Oil Co.'s No. 1 Hull, SE cor. SW Section 35-8-6, Little River Pool, has been abandoned at 4,380 feet. Indian Territory Illuminating Oil Co.'s No. 1 Proebe "A," NW cor. SW SE Section 36-8-6, had the Wilcox sand at 4,138-49 feet and made 978 bbls. Mid-Continent Petroleum Corp.'s No. 5 Wadsworth, SW cor. SE SW Section 36-8-6, was completed for 800 bbls. in the Wilcox sand at 4,138-43 feet. No. 8 Wadsworth, SE cor. SW Section 36-8-6, produced 350 bbls. from the Wilcox sand at 4,337 feet. Indian Territory Illuminating Oil Co.'s No. 3 McCulla, SE cor. NW Section 1-7-6, swabbed 764 bbls. from the Wilcox sand at 4,548-52 feet. No. 2 Soketheche, NW cor. NE Section 1-7-6, made 480 bbls. by swabbing the Wilcox sand at 4,314-18 feet and 224 bbls. on air.

Philmack Oil Co.'s No. 1 Alex, NW cor. SW SE Section 1-7-6, is dry and abandoned at 4,183 feet. The Texas Company's No. 2 Coker, NE cor. SW Section 1-7-6, had Wilcox sand at 4,341-46 feet, plugged back 1 foot and swabbed 105 bbls. oil. Indian Territory Illuminating Oil Co.'s No. 2 House "B," NW cor. NE SE Section 2-7-6, flowed 1,506 bbls. from the Wilcox sand at 4,406-10 feet. No. 3 House "B," SW cor. NE SE Section 2-7-6, was completed for 441 bbls. in the Wilcox sand at 4,140-47 feet. No. 6 Nitey, NE cor. SW NE Section 2-7-6, has been abandoned after drilling to 4,355 feet. No. 7 Nitey, SE cor. SW NE Section 2-7-6, made 414 bbls. from the Wilcox sand at 4,219-26 feet.

Indian Territory Illuminating Oil Co.'s No. 9 Nitey, NW cor. NE Section 2-7-6, pumped 215 bbls. from the Wilcox sand at 4,280-84 feet, plugged back 2 feet. Amerada Petroleum Corp.'s No. 2 Nitey, SE cor. NE Section 2-7-6, made 1,315 bbls. on air, producing from Wilcox sand at 4,133-56 feet. No. 3 Nitey, SW cor. SE NE Section 2-7-6, had Wilcox sand at 4,227-34 feet and made 2,185 bbls. Twin State Oil Co.'s No. 1 Hyde, SE cor. NE SW Section 2-7-6, has been abandoned at 4,434 feet. No. 2 Hyde, NE cor. SW

Section 2-7-6, topped the Wilcox sand at 4,365 feet, drilled to 4,367 feet and was abandoned. The Prairie Oil & Gas Co.'s No. 3 House, SE cor. NW SE Section 2-7-6, made 2,000 bbls. in the Wilcox sand at 4,267-75 feet. No. 4 Templeton, SW cor. SE SE Section 12-8-6, flowed 2,720 bbls. from Wilcox sand at 4,344-51 feet. Independent Oil & Gas Co.'s No. 1 Hotulke, SW cor. NW NW Section 23-7-6, had Wilcox sand at 4,323-24 feet and made 2,360 bbls. No. 1 W. Davis, SW cor. NW SE Section 15-8-6, is dry and abandoned at 3,347 feet. Phillips Petroleum Corp.'s No. 1 M. Drake, NW cor. NE Section 22-8-8, has been shut in for 12,000,000 feet of gas in sand at 3,197-3,260 feet.

Muskogee County

C. M. Bradley's No. 1 Townsite, Block 77, CSL NE NE Section 34-15-18, is rigging up the machine.

P. Boyle and others' No. 3 Barnett, CEL NE SE Section 8-15-15, was completed for 60 bbls. in sand at 1,617-18 feet. J. M. Foltz' No. 1 Taylor, CEL SW Section 28-15-17, has been abandoned at 1,419 feet. J. G. Buell's No. 1-A Manuel, SW cor. NE SW Section 34-15-18, is drilling at 1,300 feet. W. J. Metzger and others' No. 6 Rittenden, NE cor. SE Section 6-14-19, is dry and abandoned at 788 feet.

ANTIKNOCK QUALITIES GAIN IN IMPORTANCE

(Continued from Page 39)

tion that other specifications are more important. In listing the relative importance of specifications Doctor Brown places antiknock last, preceded by ease in starting, acceleration, power, and fuel consumption in the order named. The work of Doctor Brown and others coupled with better fractionating methods at refineries has been largely responsible for a development of the past year in which the distillation range of domestic grades of gasoline have been lowered with the view of securing the ease in starting and acceleration demanded by the average automobile owner. It is significant in this connection that the Ethyl Gasoline Corp. in its new contracts is requiring the distributors of ethyl gasoline to use a more volatile motor fuel as a base. This change was explained in the November 10 issue of The Oil and Gas Journal (page 139).

The position of Doctor Brown is supported not only by the natural gasoline industry but by many in the refining and marketing branches. They are directing their efforts in the development of a better gasoline to the volatility end rather than finding new chemicals as a substitute for tetraethyl lead or changing refining methods so as to produce gasolines which have the antiknock properties naturally. They expect to give to the present low compression engines the easy start, acceleration and speed with all the necessary antiknock which is claimed for the new high compression engine. This change is to be accomplished without any radical change in present refining and marketing methods.

Search for Substitutes

Those who believe that the higher compression engines are to be the next big development in automobile manufacture are naturally attempting to solve their problem from a different angle. In a few cases at least refiners have satisfied themselves that they will not be able to produce a product with their present equipment which will satisfactorily compete with ethyl gasoline as a fuel for a high compression engine.

This brings up the question of methods for testing antiknock motor fuels with the view of determining their actual performance in automobiles. In order to avoid arguments the writer prefers to discuss this phase of the problem very briefly. Although the refining industry knows much more about testing gasoline for detonation than it did six months or a year ago there is yet no standardized method with which comparable results can be obtained.

The writer has seen some tests which would indicate that most cracked gasoline obtained in Mid-Continent refinery operations would give satisfactory results in engines of even higher compression ratios than is contemplated by the motor car manufacturers at this time. Other tests indicated than these same gasolines were a long way from being the equal of ethyl gasoline. A large number of tests made by one company which does not sell ethyl gasoline showed that the only motor fuel comparable with ethyl gasoline from the antiknock phase was a heavy benzol blend, a gasoline secured in vapor phase refining, and a third gasoline which apparently was obtained by cracking a Spindletop or California crude oil.

A large number of refinery organizations have installed laboratory equipment of one type or another for testing motor fuels. These companies in many cases have had difficulty in making their tests check from day to day on gasolines obtained from their own plants. There is also the situation in which motor fuel experts disagree as to how the laboratory tests should be interpreted after they are made.

This confusion simply adds emphasis to the statement often heard during the past year that there was an immediate need of some method of test which could be adopted as standard. The Bureau of Standards is working on this problem and may have something definite to report at the annual meeting of the American Petroleum Institute next month.

Use of Chemicals

In looking for a motor fuel with the maximum antiknock value the average refinery naturally would like to be able to manufaceure it on a commercial basis at his plant without blending with chemicals. Some refiners favorably located in regard to a supply of the right type of crude as previously explained believe they will be able to make a substantial part or all of their gasoline into a satisfactory antiknock motor fuel.

Some are testing out chemicals to take the place of tetraethyl lead. These chemicals are generally developed by laboratories outside the industry. So far as known none of merit has been found which could be made available at a price to compete with tetraethyl lead.

In regard to tetraethyl lead it is the plan of the Ethyl Gasoline Corp. to make the chemical generally available to those refiners and marketers who will agree to distribute the product in accordance with its requirements. The first distribution has been given to certain companies exclusively but this plan is to be changed as the present contract expires. Some of the territory is now open for general distribution. Other territories still have considerable periods, the exclusive contract of the Standard Oil Co. of Indiana not expiring until March 1, 1929.

The trend toward antiknock motor fuels has also increased the demand for benzol, the motor fuel obtained as the by-product of the coke ovens. Many distributors have been able to build up a large volume of business by blending the benzol with regular grades of refinery gasoline. This is not a solution to the general manufacture of antiknock motor fuels however. The amount of benzol is limited due to the fact that it is a by-product and it is estimated that the present output as blending material would not give the necessary antiknock specifications to more than 10 per cent of the total motor fuel demand.

Vapor Phase Cracking

As one possible solution to their problem a few refiners have turned to vapor phase cracking while others are investigating its possibilities. Vapor phase cracking is distinguished from the common method of cracking now generally practiced at refineries in that the cracking takes place in the vapor rather than the liquid phase.

In the past there have been several types of the vapor phase installations tried out by refinery organizations. They were unable to compete in efficiency with the liquid phase installations and while the latter had a very rapid expansion the vapor phase units were shut down and development largely stopped.

A few inventors, however, have been persistent in endeavoring to place their processes on a commercial basis and during the past year they have again been able to interest many in the refining fraternity, including some of the larger operators. Ever since vapor phase refining was started it has been known that the gasoline produced from the operation contained a large percentage of aromatics the hydrocarbons now desired in gasoline. In the early development this fact was considered a liability rather than an asset. Other objections offered to the gasoline was its color, presence of gums and bad odor coupled with low yields.

It is still not claimed that the process can compete with the so-called liquid phase cracking in the per gallon cost of finished gasoline. The renewed interest in that method of cracking is due to the belief that it can be made to produce a product which will meet all requirements as to antiknock. It is claimed that some installations are manufacturing a product which is the equal of benzol as a blending material with ordinary grades of gasoline. In such cases it is apparent that the refiner could afford to pay a relatively high manufacturing cost.

It is also assumed that just as soon as the vapor phase cracking is given serious consideration by the refining industry it will be able to improve greatly the manufacturing operation just as has been done with liquid phase cracking during the past few years.

SURVEY OF PETROLEUM SITUATION ABROAD

(Continued from Page 37)

Venezuela

In Venezuela, considerable opposition is developing against the Royal Dutch policy of refining Venezuelean oil at Curacao and Aruba, Dutch possessions, instead of establishing a sizeable proportion of their refinery capacity within Venezuela. Undoubtedly, if American petroleum interests were to consider the establishment of refineries in Venezuela, as has been recently reported, on behalf of the Pan American interests, such a proposal would meet with the logical support of the Venezuelean Government.

Bolivia

Reports now reaching this country state that for almost an entire week in October the sessions of the Bolivian Parliament were devoted to a prolonged diatribe against the Standard Oil Co. of Bolivia which was most successfully offset by an investigation of the facts involved. The leader of the attack was formerly Bolivian Minister to Mexico.

Paraguay

In Paraguay, Mexican influences have been noted in attempting to agitate public opinion in favor of petroleum nationalization through student organizations.

Upon the solution of the present Mexican petroleum situation and the success of the Spanish petroleum monopoly depend in great measure the future of the petroleum industry in Central and South America. These two influences are bound to have a tremendous effect on public opinion in Latin-America.

Russia

Russian oil exports for the fiscal year ending September 30 amounted to 2,038,000 metric tons, exceeding all previous Russian records. The previous high mark was 1,837,000 metric tons, back in 1904, before the decline in production under the old regime. Exports for the year were 123.4 per cent higher than those in 1913 and 38.4 per cent higher than in 1925-26.

The detail figures show a complete change in the character of the exports since 1913. Gasoline and fuel oil formed 68 per cent of the total export during the year, kerosene only 21.5 per cent. In 1913 gasoline and fuel oil accounted for only 6 per cent and kerosene 69.5 per cent.

The principal consumers of Soviet oil products during the past year were: Italy, 447,600 metric tons; France, 386,000; Great Britain, 381,000; Central Europe and Germany, 346,000. During the year exports to France increased 115 per cent, to Egypt and India 85 per cent, to the Baltic States and Finland 56 per cent, to Germany and Central Europe 44 per cent, to Italy 25.5 per cent.

Rumania

A slightly better feeling prevails in Rumania oil circles. The effects of the drastic reduction in export taxes are beginning to be felt and prices of both crude oil and refined products have increased 12 to 15 per cent during the past month. August exports show an increase of some 30,000 tons over those of July. Crude production for August was 316,886 tons as compared with 327,449 tons during July. The Banca Minelor of Bucharest which formerly owned and operated oil properties in the Gura-Ocnitzei Field, which produced 52,000 tons in 1926, has sold its oil interests to the "Romana-Africana", a company recently organized with a capital of Lei 600,000,000 fully subscribed by the British interests and is a subsidiary of the Service Petroleum Co., Ltd., of London. The Rumanian oil refineries have entered into an agreement by the terms of which a committee will hereafter determine the amount of refined products to be furnished by each refinery for the supply of the internal market. The committee will also fix prices, subject to the Rumanian Mining Law, which provides that internal prices must not exceed external prices. The object of the agreement is, of course, the elimination of competition on the internal market.

Shipments Through Suez

Shipments of Persian mineral oil through the Suez Canal have registered heavy increases in both southbound traffic in ballast and northbound traffic in loaded tankers. From a total of 3,105,000 net tons of tankers recorded in the canal in 1926 to and from Abadan, the traffic of tank ships in ballast reached 1,541,000 net tons per cent of the total.

The following table shows the progress of this twofold movement during the post-war years:

Tanker Traffic Between Europe and Abadan

Years	Net Tonnage—Northbound	Southbound	Total
1919	250,000	237,000	499,000
1920	259,000	205,000	475,000
1921	513,000	586,000	1,099,000
1922	873,000	862,000	1,735,000
1923	963,000	1,013,000	1,985,000
1924	1,116,000	1,153,000	2,271,000
1925	1,292,000	1,366,000	2,658,000
1926	1,546,000	1,550,000	3,105,000

This twofold movement represents a rather complicated organization of maritime transport. Most of the mineral oil is transported on tank ships of the British Tanker Co., which is affiliated with the Anglo-Persian Oil Co.

While the British Tanker Co. is waiting the completion of 18 tankers which were recently ordered, it is at present chartering many ships, some of which belong to Norwegian shipowners. For the transportation of heavy cargoes in particular this company has recourse to tank ships of the British Molasses Co. even though they were specially constructed for the transportation of molasses from Java.

Although ships totaling 300,000 net tons were chartered by the British Tanker Co. in 1926, all the necessary tonnage was not thus furnished. Shipments were also made at Abadan on ships owned either by the British or French Governments or by different shipowners such as the Anglo-Saxon Petroleum Co. and the Associated Petroliere which is a French company.

Companies Participating

The participation of the different companies in the Anglo-Persian oil traffic through the Suez Canal during 1926 was as follows:

Company—	Net Tonnage
British Tanker Co., (including ships chartered by that company)	2,433,000
British Government	323,000
Associated Petrollere	124,000
Anglo-Saxon Petroleum Co.	92,000
French Government	32,000
Miscellaneous	101,000
Total	3,105,000

Oil imports into the United Kingdom during the four weeks ending October 3 show a slight increase over the two preceding periods, with, however, a lower quantity and percentage in the total from the United States. The quantity was chiefly in crude petroleum, receipts of this item, however, being below the average for the year. Lubricating oils and gasoline also showed increases, while de-

clines were registered in the imports of fuel oil and kerosene.

The fourth shipment of the year of crude petroleum from the United States, amounting to about 2,500,000 imperial gallons, was received during this period, with also a shipment of about 2,500,000 gallons from Mexico, three shipments aggregating 5,000,000 gallons from Curacao, and two shipments totaling over 3,000,000 gallons from Colombia.

Lubricating oil receipts, amounting to just under 10,000,000 gallons, were the largest in the year to date for any four weeks' period, and also included the largest shipment of the year from Russia to date amounting to 2,500,000 gallons. Fuel oil imports were slightly less than in the two preceding periods, about half the total coming from Curacao, representing continued heavy shipments of Venezuelan oil, with the balance chiefly from Mexico and the United States, and one shipment from Trinidad. The third shipment of gasoline during the year from Curacao amounting to nearly 3,000,000 gallons, was also received during this period, as well as about 3,000,000 gallons from the Netherlands East Indies, and 2,500,000 gallons from Rumania.

Russia again contributed nearly 2,000,000 gallons to the imports of kerosene, the balance coming from a variety of sources including Persia and the Netherlands East Indies.

THING OF MIGHT IS OIL-FIELD TRACTOR

(Continued from Page 41)

ize the importance of having trained men in charge of tractors is the Phillips Petroleum Co., which conducts annual contests for the operators of its fleet of 25 tractors in the Burbank Field. Two trials are held, one for general mechanical condition, indicating the driver's care of his machine, and the other a 50-foot race to show quickness in starting and speed of operation. Prizes are awarded in each of the contests.

In the 1927 contest last September, three judges, two of whom were shop superintendents of the company, devoted more than two hours to careful examination of the 25 tractors and scoring them in the general condition trial. Engine compression counted 20 points, lubrication 20, tight bolts and nuts 20, condition of bearings 20 and cleanliness and general condition 20. The age of the tractor and the amount of work it had done were taken into account in this competition.

In the speed contest, the tractors were lined up at one edge of the trial field and at the crack of a rifle each driver, standing in front of his machine, rushed back, started his tractor and tried to beat his fellows to the steel tape stretched across the field 50 feet ahead. The winner in this contest started his machine and drove it 50 feet in 23 seconds. The second man did it in 25 seconds.

Charles E. Klein, field superintendent, said the annual contests resulted in marked increase in the efficiency of the tractor operators and the other members of the tractor crews and that they fostered pride among the men in keeping their machines at the highest point of efficiency and general excellence. The increased efficiency of the operators was said to have resulted in marked lowering of the cost of repairs.

SEMINOLE PRODUCTION PASSES 700,000 GALLONS

(Continued from Page 139)

materially in gasoline content from that first obtained in the development of the older pools of the Seminole area.

In addition to the Empire plants the Forrest E. Gilmore Co. of Tulsa, is building an eight-unit compressor plant on the lease of the Blackwell Oil & Gas Co. in the Little River Field. This plant will be operated in connection with the gas lift similar to the Empire Indian Territory operations. The plants which have an output between 12,000 and 15,000 daily will start operating about December 1. The same company operates three similar type plants in the Bowlegs Pool.

In the four older pools (Seminole, Bowlegs, Searight and Earlsboro) of the Greater Seminole area there has not been a great amount of new construction during the past eight weeks. The production, however, has advanced rapidly due to the fact that some of manufacturers have had more gas with which to operate their plants nearer their maximum capacity.

The Sinclair Oil & Gas Co. continues to be the largest manufacturer, its output of 270,000 gallons daily being 35 per cent of the total output of the entire area. The company has practically doubled its output during the past two months. This increase has come largely from the company's new plant in the Bowlegs Pool. This plant originally started with 26 units. Six more were recently added and now an additional six units are to be built. The plant at present has an output between 130,000 and 140,000 gallons daily. Part of the plant is operated in conjunction with the company's gas lift operations and the remainder as an oil absorption unit. The six new compression units will be in operation before the end of the year. The company is also operating a new booster unit in the Earlsboro Field which is making 16,000 gallons of gasoline daily.

The Barnsdall Oil Co. is enlarging its plant in the Earlsboro Pool. The present output of 300,000 gallons daily will shortly be increased to 40,000 or 45,000 gallons. The following table shows the production by companies at the present time. A complete table giving plant locations appeared in September 29 issue of The Oil and Gas Journal, page 80.

Natural Gasoline Production in Greater Seminole

	Dly. Prod. Gals.
Amerada Pet. Corp., three plants	32,000
Barnsdall Oil Co., one plant	30,000
Carter Oil Co., three plants	140,000
Crosbie Oil Co., one plant	10,000
Empire Gasoline, six plants	100,000
Forrest E. Gilmore Co., four plants (one building)	20,000
Gypsy Oil Co., one plant	30,000
Independent Oil & Gas Co., one plant	15,000
Magnolia Pet. Co., one plant	15,000
Pure Oil Co., two plants	55,000
Roxana Pet. Corp., one plant	18,000
Sinclair Oil & Gas Co., five plants	270,000
Victor Gasoline Co., three plants	25,000

AMERICAN DESCRIBES REFINING IN JAPAN

(Continued from Page 138)

panies at present contemplated any material additions to their equipment.

The working day at the refineries is 10 hours. For overtime work straight-time wage is paid but it is against the law to require any one workman to work more than 10 days' overtime in any one month. The wages are very low. Most of the heavy carrying of material, the mixing of cement and the like, that is, the rough labor, is done by women who receive 80 cents for a 10-hour day. Male laborers receive $1.25 a day. The rule is that any work done must be paid for each night. The average refinery pay, that is, the result obtained by dividing the total pay roll by the number of employes, including the superintendent, engineers, stillman and foremen as well as the unskilled help averages 98 cents a day.

Refineries run continuously but are closed down two days a month, the 1st and the 15th. At the end of the year each worker who has been employed for a year receives a bonus of 70 per cent of one month's pay and if the worker has taken no holiday during the year the bonus is increased to 170 per cent of one month's pay. In his construction work, Mr. Watt tried to introduce the wheelbarrow but it was no use. The Japanese did not seem to get the hang of using a wheelbarrow and any way it was contrary to Japanese custom. Heavy weights are carried on poles by carriers; loose material, such as cement and gravel, in baskets. While in Japan Mr. Watt installed units of the Schulz vacuum process in the refineries of the Nippon Oil Co. at Niigata and of the Ogura company at Tokyo.

REFINING OF WEST TEXAS CRUDE OIL

(Continued from Page 40)

It is a conservative estimate that the gas oil and fuel oil, used as a cracking stock, will yield from 30 to 50 per cent of gasoline, if processed in a modern cracking unit. This increased yield of gasoline would be equivalent to a total yield from the original oil of approximately a minimum of 45 per cent and possibly a high yield of 58 per cent.

A remarkable characteristic is indicated in the low kerosene content. This may be an important factor in balancing refinery yields with market demands; especially where large quantities of the crude are processed.

The Smackover and Healdton oils are now yielding from 30 to 50 per cent gasoline by combined topping and cracking methods. The market has evidenced some demand for a motive fuel having an antiknock value. The Smackover oil is producing a gasoline of high quality with such recognized antiknock values that it commands a premium over the ordinary product. These facts are evidence of special composition.

The Panhandle oil is known to be capable of furnishing by both topping and pressure methods, an excellent grade of gasoline. This gasoline is exceptionally stable to light and has antiknock value. Experience will probably demonstrate the presence of similar qualities in the West Texas oils.

The lower price, according to the present method of classification, which these oils command, permits the refiner to obtain his oil at reduced cost. Consequently, with a normal market for the products there is increased opportunity to realize a profit on the refining operation.

The corrosive conditions which are to be met with when refining the West Texas oil will require special study. It has been reported that several plants have retarded the corrosive action of the Panhandle oil by operating the stills without steam, and this kind of operation may be found satisfactory with this oil. While ammonia may prove adequate to prevent serious corrosion, there is the probability that more severe and complicated treatment will be required such as the copper oxide process as introduced by Frasch for the sweetening of the Lima oils.

When designing a refinery for crudes of this character it will be necessary to provide special apparatus. Indeed, this idea if followed for the refining of every crude would have meant success instead of failure, to the promoters of many a refinery. There is no established method for refining oil and the changes made in refining plants, together with operating detail, are ample proof of this. Each new crude is a problem in itself and its successful purification will always depend upon the skill and knowledge of the refiner.

GIBBONS AND KIMBALL ENTER OIL BUSINESS

J. Burr Gibbons, general manager of the recent International Petroleum Exposition, and a prominent figure in the civic and industrial life of Tulsa and Oklahoma for 20 years, has entered the oil business under the firm name J. Burr Gibbons Co.

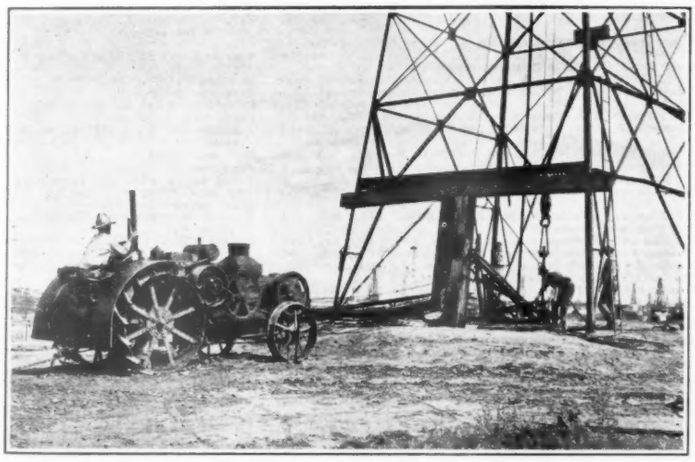
Mr. Gibbons, who is president of the Hofstra Manufacturing Co., is a former president of the Tulsa Chamber of Commerce and actively identified with numerous enterprises in Tulsa. He has a wide acquaintance among leaders of the oil industry.

Associated with Mr. Gibbons, is Kent K. Kimball, a geologist of wide experience. Mr. Kimball was five and one-half years with the United States Geological Survey; four years with the Mid-Kansas Oil & Gas Co., and has been doing consulting work for the last year and a half. Mr. Kimball had charge of the scientific and educational building and assembled the scientific and technical displays which were the outstanding feature of the 1927 Petroleum Exposition.

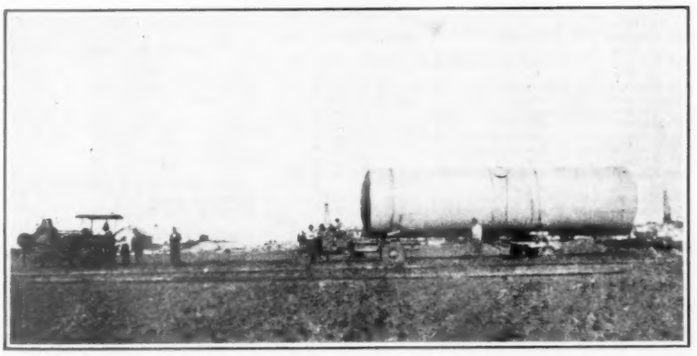
The J. Burr Gibbons Co. has offices in the Bliss Building. The company will handle leases, royalty and production.

INCREASE STATION CAPACITY

HOUSTON, Tex., Nov. 14.—Humble Oil & Refining Co. is increasing the capacity of its booster station from the Yates Pool to the Kemper station, near Big Lake, from 19,000 to 25,000 bbls.



Pulling tubing with tractor in Tonkawa Field.



Pulling truck and storage tank out of a mudhole in Winfield, Kan., and taking it through a plowed field while it was raining.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 47)

J. S. Cosden et al's No. 3 G. W. Connell-A, SE cor. NE Sec. 13, Blk. B-16, elev. 2,849 ft. ... Top pay 3,499 ft.; shut down 3,545 ft.; makes 50-bbl. flow every 2 weeks.

The Texas Company and Cosden's No. 1 W. E. Connell, SE cor. Sec. 24, Blk. B-16, School Land ... Drilling 350 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 J. A. Young, Sec. 208, B. B. B. & C. Sur. ... Total depth 1,110 ft.; underreaming 12-in.

Ideal Oil Co.'s No. 1 Jameson, C SE Sec. 111, Blk. 1, H. & T. C. Sur. ... Hole full salt water 2,345-2,520 ft.; shut down 3,804 ft.

Marland Oil Co. and Texon's No. 1 McCall, Sec. 108, Blk 3, H. & T. C. Sur. ... Rig.

R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T. & P. Sur. ... Shut down for orders 2,725 ft.

The Texas Company's No. 1 D. S. Stevens, C SW SE SE Sec. 79, Blk. 1, H. & T. C. Sur. ... Total depth 1,325 ft.; run. 10-in.

FOARD COUNTY

Clark et al's No. 1 Atkins ... Lime 1,530-1,930 ft.; show gas 1,885 ft.; shut down for pipe 2,175 ft.; hole caving and full of water.

Fain-McGaha Oil Corp. et al's No. 1 Mathews ... Total depth 2,550 ft.; plugged back to 1,506 ft.; swabbing sand 1,484-92 ft.; showing very little oil.

The Texas Company's No. 1 Watkins ... Drilling 2,900 ft.

GAINES COUNTY

Westheimer & Daube's No. 1 Birge & Forbes Land Co., Sec. 208, Terrell County School Land ... Cemented 8-in. 3,900 ft.; underreaming 4,650 ft.

GARZA COUNTY

Emerald Oil Co.'s No. 1 D. Boren, NW cor. N ESec. 137, Blk. 5, H. & G. N. Sur. ... Small show oil in gray lime 1,884-1,902 ft.; shut down 2,600 ft.; show oil and hole full water 2,420-60 ft.

Gulf Prod. Co.'s No. 1 E. P. Swenson-A, Sec. 67, Blk. 2, H. & G. N. Sur. ... Drilling 100 ft.

GLASSCOCK COUNTY

California Co.'s No. 2 W. B. Currie, Lease 1, NE cor. NW Sec. 213, Blk. 29 ... Drilling 960 ft.

HOWARD COUNTY

California Co.'s No. 1 Fisher Bros., SE SW NW Sec. 36, Blk. 33, T. & P. Sur., T-1-S ... Shows oil 1,530-48 ft. and 1,562-64 ft.; hole full water 2,020-34 ft.; drilling 2,475 ft.

Coyle-Concord Oil Co.'s No. 1 Dora Roberts ... Drilling 1,470 ft.

Dixie Oil Co.'s No. 1 H. R. Clay ... Total depth 1,963 ft.; underreaming and cleaning out.

W. W. Donnelly et al's No. 1 Martin, SE cor. Sec. 41, Blk. 33, T-2-N, T. & P. Sur., elev. 2,552 ft. ... Drilling 3,155 ft.

Henshaw et al's No. 1 W. R. Settles, SW SE SW Sec. 135, Blk. 29 ... Hole full sulphur water 1,335-80 ft.; total depth 1,900 ft.; shut down.

Marland Oil Co.'s No. 1 Clay-E, NW NE SE Sec. 138, Blk. 29 ... Pay 2,480-2,500 ft.; swabbed approx. 160 bbls.; total depth 2,790 ft.; rig burned down; rebuilt; rigging cable tools.

Marland Oil Co.'s No. 2 Clay-E ... Rigging rotary.

Marland Oil Co.'s No. 1 Richardson, C NW Sec. 12, Blk. 32, T. & P. Sur., T-1-S ... Total depth 495 ft.; pulled in rig; rebuilding.

Marland Oil Co. and Zoch's No. 1 Jones, Sec. 32, Blk. 27, T. & P. Sur., elev. 2,218 ft. ... Shut down 500 ft.

Marland Oil Co.'s No. 1 A. M. Fisher, Sec. 1, Blk. 33, T. & P. Sur., T-2-S, elev. 2,730 ft. ... Sulphur water 3,315-25 ft.; drilling 3,715 ft.

Mays, Nixon & Flowers' No. 1 W. J. Flowers ... Rotary rig.

Miley and Marland Oil Co.'s No. 1 C. D. Read, C NW Sec. 12, Blk. 31, T. & P. Sur., T-1-N ... Location.

Owens & Sloan's No. 2 Dora Roberts, SW cor. SE Sec. 136, Blk. 29 ... Rotary derrick.

Peer Oil Corp.'s No. 1 Read, C NW Sec. 39, Blk. 30, T. & P. Sur., T-1-N ... Drilling 2,700 ft.

Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mrs. Connaly, NE cor. Sec. 15, Blk. 33, T. & P. Sur., T-1-S ... Top salt 1,425 ft.; hole full salt water 1,760-1,800 ft.; show oil 3,065 ft.; drilling 3,435 ft.

Texon and Marland's No. 1 W. R. Settles, Lease A, C SW Sec. 134, Blk. 29, W. & N. W. Sur ... Swabbed 90 bbls. in 8½ hrs. 1,345-51 and 1,375-82 ft.; now averages 82 bbls. oil and 22 bbls. water.

Vitek Oil Co.'s No. 1 H. R. Clay ... Shut down 1,497 ft.

Bristow & Merrick's No. 4 A. J. Hooks ... Rigging up rotary.

HUDSPETH COUNTY

American Land Co.'s (was Lockhart Bros.') No. 1 Gardner & Moseley, C SE Sec. 5, School Blk. 21 ... Shut down 262 ft.

Western States Oil Co.'s (was Lockhart & Co.'s) No. 1 Moore, C SE Sec. 16, Blk. 71, T. & P. Sur., T-6 ... Drilling 325 ft.

Western States Oil Co.'s No. 1 Gardner & Mosley, Sec. 12, Blk. 18 ... Rigged up and shut down.

IRION COUNTY

Cash Dollar et al's No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur. ... Shut down 2,500 ft.

JEFF DAVIS COUNTY

J. K. Hughes Dev. Co.'s No. 2 Means ... Drilling 1,800 ft.

Humble O. & R. Co.'s No. 2 Crecencio Flores, 1,120 ft. N and 850 ft. E of SW cor. Sec. 34, Blk. 58, T. & P. Sur., Twp. 3 ... Shut down 1,980 ft.

JONES COUNTY

Midwest Expl. Co.'s (was Campbell et al's) No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur., elev. 1,832 ft. ... Top pay 2,498 ft.; deepening to 2,524 ft.; swabbed 115 bbls.; shut down for orders 3,009 ft.

Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands ... Seven bailers salt water per hour at 1,465-1,500 ft.; hole full water 1,900-07 ft.; shut down 2,430 ft.

Gibson & Johnson's No. 1 R. J. Camp, S. M. Hale Sur. ... Drilling 550 ft.

Hutson & Weaver's No. 1-A Smith ... Drilling 2,100 ft.

Phillips Pet. Co.'s No. 2 J. C. Mason ... Fishing joint 8-in. 2,335 ft.

W. G. Stough et al's No. 1 W. C. Bennett, Sec. 43, Orphan Asylum Sur. ... Shut down 800 ft.

W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2 ... Shut down 1,740 ft.

Stebbins Oil Co.'s No. 2 Higgs, SE cor. Sec. 30, W. T. Scott Sur. ... Location.

Stebbins Oil and Sinclair O. & G. Co.'s No. 1 Scott ... Total depth 1,945 ft.; underreaming.

Swensondale Oil Co.'s No. 1 Caton, SW NW Sec. 9, Deaf & Dumb Asylum Lands ... Total depth 3,020 ft.; show oil 3,008-13 ft.; shot 80 qts.; bridged; cleaning out.

KNOX COUNTY

Deep Rock Oil Co.'s No. 1 Moore ... Shut down 200 ft.

Deep Rock Oil Co.'s No. 1 Beavers, CSL Sec. 224, Blk. 44, elev. 1,441 ft. ... Water sand 3,035-55 ft.; drilling 3,460 ft.

Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 3,590 ft. W of NE cor. Sec. 31, Blk. 4 ... Total depth 2,455 ft.; shut down.

LOVING COUNTY

Lockhart Bros.' No. 1 fee, Sec. 85, Blk. 33, H. & T. C. Sur. ... Location.

Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 63, T-2, T. & P. Sur., elev. 2,934 ft. ... Shut down 1,030 ft.; in litigation

LYNN COUNTY

Elpe Oil Co.'s No. 1 Nevols, NW cor. Sec. 6, Blk. C-42, School Lands ... Shut down 630 ft.

MIDLAND COUNTY

Orbit Oil Co.'s No. 1 Moreland, C SE Sec. 17, Blk. 39, T. & P. Sur., T-1-S ... Shut down 185 ft.

MITCHELL COUNTY

Paul Teas et al's No. 1 A. C. Mills, NW cor. C. A. O'Keefe Sub. 11, J. P. Smith Sur. ... Location.

Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T. & P. Sur., T-1-N ... Total depth 2,508 ft.; shut down.

NOLAN COUNTY

Herbert Oil Co.'s (was McClesky and others') No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur. ... Rigged up and shut down.

Reiter-Foster Oil Co.'s No. 1 T. E. Arledge, Sec. 317, Blk. 1, H. & T. C. Sur. ... Building rig.

Zweifel and others' No. 1 Longbotham, C SE Sec. 130, Blk. 1, H. & G. N. Sur. ... Shut down 3,575 ft.

PECOS COUNTY

George Anderson et al's No. 1 McKensie, C SE N half Sec. 6, Blk. 604 ... Top salt, 1,010 ft; sulphur water, 2,230 ft. and 2,320-25 ft.; show oil 2,465-70 ft., lime; drilling 2,565 ft. with 900 ft. sulphur water.

George Anderson's No. 1 Sherbine Bros. ... Rig on ground.

Cummings et al's No. 1 Blackstone & Slaughter ... Drilling 670 ft.

M. C. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, H. & G. W. Sur., elev. 2,555 ft. ... Shut down 640 ft.

Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 26, Blk. 126, T. & S. L. Sur., elev. 2,267 ft. ... Hole full sulphur water 2,560 ft.; shut down 3,501 ft.; contract completed.

Gibson Oil Corp.'s No. 1 R. R. Russell ... New location; rig on ground.

George A. Henshaw et al's No. 1 B. T. Corder, C SW Sec. 74, Blk. 2, C. C. S. D. Sur. ... Location.

George A. Henshaw, Jr., No. 1 Schimmel, Sec. 29, Blk. 144, T. & St. L. Sur., elev. 2,780 ft. ... Drilling 1,126 ft., brown lime and anhydrite.

Kirby Pet. Co. and Roxana's No. 1 W. W. Turney, NW cor. SW Sec. 11, Blk. 140, T. & St. L. Sur. ... Hole full sulphur water 975-83 ft.; shut down 1,189 ft.

Mid-Kansas O. & G. Co.'s No. 1 Pryor & Wilson, NW cor. Sec. 3, Blk. 5, T. C. R. R. Sur. ... Location.

Moody Oil Corp.'s No. 1 B. T. Corder, C SW Sec. 71, Blk. 2, C. C. S. D. Sur. ... Location.

Olean Pet. Co.'s No. 1 G. N. Harral, C SW Sec. 82, Blk. R-3, G. C. & S. F. Sur., elev. 3,005 ft. ... Drilling 2,600 ft.

Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addn. Sur. Fort Stockton, elev. 3,980 ft. ... Shut down 3,440 ft.

Quinby Oil Co.'s No. 2 Bennet, C NW 592, Blk. 105, G. C. & S. F. Sur., elev. 2,560 ft. ... Shut down 1,457 ft.

Quinby Oil Co.'s No. 1 A. A. Gary, 660 ft. N and 1,320 ft. E SW cor. Sec. 593, Abst. 3,009, elev. 2,551 ft. ... Shut down 700 ft.

Red Bank Oil Co.'s No. 1 Arthur Harral ... Rig on ground.

B. J. Spikes' No. 1 George Brown ... New location; machine on ground.

Transcontinental Oil Co.'s No. 1 Blackston & Slaughter, Sec. 29, Blk. 129, F. St. L. Sur., elev. 3,539 ft. ... 250 ft. sulphur water in black sand 1,150-80 ft.; small show oil 1,510 ft.; show gas 1,540 ft.; show oil 2,080 ft.; drilling 2,890 ft.; fighting cave.

World Oil Co.'s No. 1 Kloh, Sec. 47, Blk. 48, Twp. 3, T. P. R. R. Sur., elev. 2,810 ft. ... Cellar.

World Oil Co.'s No. 1 Serf, SW cor. NE Sec. 10, Blk. 130, T. & St. L., elev. 3,245 ft. ... Building rig.

Yates Pool, Pecos County

(* denotes test in extension territory.)

*Allsman & Bell's No. 4 River Bed, 325 ft. upsteam from No. 3 ... Show oil 710 ft.; drilling 815 ft.

*Allsman & Bell's No. 5 River Bed, 312 ft. N of No. 4 ... Location.

*Allsman & Bell's No. 11 River Bed, 150 ft. S & E of NE cor. Sec. 71, Blk. 1 ... Driving piling.

California Co.'s No. 2 Yates, Sec. 34, Blk. 194 ... Rig standing.

California Co.'s No. 6 Yates, Sec. 34, Blk. 194 ... Drilling 925 ft.

California Co.'s No. 7 Yates, Sec. 34, Blk. 194 ... Drilling 660 ft.

California Co.'s No. 8 Yates, Sec. 34, Blk. 194 ... Fishing 287 ft.

California Co.'s No. 4 Smith, Sec. 35, Blk. 194 ... Moving in standard rig.

California Co.'s No. 5 Smith, Sec. 35 ... Clearing location.

California Co.'s No. 6 Smith, Sec. 35 ... Clearing location.

California Co.'s No. 7 Smith, Sec. 35 ... Clearing location.

*Douglas Oil Co. and Roxana's No. 1 J. T. Sellman, SW cor. Sec. 6, Blk. 194 ... Sulphur water 1,518-19 ft.; shut down for orders.

*Day Bros. & McKnight's No. 1 Yates, NW cor. Sec. 58, Blk. 1 ... Top salt 440 ft.; drilling 483 ft.

Gulf Prod. Co.'s No. 2 Smith, Sec. 38, Blk. 194 ... Drilling 475 ft.

*Gulf Prod. Co.'s No. 1 Yates, Runnels Co. School Land ... Drilling 520 ft.

*Gulf Prod. Co.'s No. 2 Yates, Runnels Co. School Land ... Drilling 625 ft.

*Gulf Prod. Co.'s No. 3 Yates, Runnels Co. School Land ... Cem. 8-in. 1,220 ft., brown lime.

*Humble O. & R. Co.'s No. 3 Smith, Sec. 36, Blk. 194 ... Cem. 6-in. 1,312 ft.

*Humble O. & R. Co.'s No. 1 Smith-B, Sec. 101, Blk. 194 ... Fishing 265 ft.; 4 strings tools in hole.

*Humble O. & R. Co.'s No. 2 Smith-B, Sec. 101, Blk. 194 ... Drilling 490 ft.

*Mazda and Savoy's No. 3 Smith, Sec. 24, Blk. 194 ... Location.

McMan and Marland's No. 7 Yates, Sec. 34½ ... Total depth 1,193 ft.; cem. 6-in.

*McMan and Marland's No. 8 Yates, Sec. 34½, Blk. 194 ... Top pay 1,340 ft.; fishing 1,365 ft.; flowed 400 bbls.

*McMan and Marland's No. 9 Yates, Sec. 34½, Blk. 194 ... Run. 6-in. 1,302 ft.; 200 ft. oil.

*McMan and Marland's No. 10 Yates, Sec. 34½, Blk. 194 ... Drilling 835 ft.

McMan and Marland's No. 11 Yates, Sec. 34½, Blk. 194 ... Rigging up.

McMan and Marland's No. 12 Yates, Sec. 34½, Blk. 194 ... Moving in standard rig.

Marland Oil Co.'s No. 5 Yates-A, Sec. 60, Blk. 1 ... Rigging up.

Marland Oil Co.'s No. 6 Yates-A, Sec. 60, Blk. 1 ... Building rig.

Marland Oil Co.'s No. 7 Yates-A, Sec. 60, Blk. 1 ... Building rig.

Marland Oil Co.'s No. 8 Yates-A, Sec. 60, Blk. 1 ... Rigging up.

Mid-Kansas and Transcontinental's No. 8 Yates-A, Sec. 33½, Blk. 194 ... Rigging up.

Mid-Kansas and Transcontinental's No. 9 Yates-A, Sec. 33½, Blk. 194 (W of No. 2) ... Drilling 810 ft.

Mid-Kansas and Transcontinental's No. 10 Yates-A, Sec. 33½, Blk. 194 (N of No. 1) ... Waiting for machine.

*Mid-Kansas and Transcontinental's No. 11 Yates-A, Sec. 33½, Blk. 194 (S of No. 1) ... Waiting on electric motor.

Mid-Kansas and Transcontinental's No. 12 Yates-A ... Rigging up.

Mid-Kansas and Transcontinental's No. 13 Yates-A ... Rigging up.

Mid-Kansas and Transcontinental's No. 14 Yates-A ... Rigging up.

*Mid-Kansas and Transcontinental's No. 5 Yates-B, Sec. 61, Blk. 1 ... Drilling 1,058 ft.; flowed 1,234 bbls. Saturday.

Mid-Kansas and Transcontinental's No. 7 Yates-B, Sec. 61, Blk. 1 ... Drilling 470 ft.

Mid-Kansas and Transcontinental's No. 8 Yates-B, Sec. 61, Blk. 1 ... Drilling 720 ft.

Mid-Kansas and Transcontinental's No. 9 Yates-B, Sec. 61, Blk. 1 ... Show gas 560 ft.; run. 8-in. 850 ft.

Mid-Kansas and Transcontinental's No. 10 Yates-B, Sec. 61, Blk. 1 ... Clearing location.

Mid-Kansas and Transcontinental's No. 11 Yates-B ... Digging cellar.

*Mid-Kansas and Transcontinental's No. 12 Yates-B ... Location.

Mid-Kansas and Transcontinental's No. 13 Yates-B ... Cellar.

Mid-Kansas and Transcontinental's No. 14 Yates-B ... Cellar.

Mid-Kansas and Transcontinental's No. 15 Yates-B ... Cellar.

Mid-Kansas and Transcontinental's No. 16 Yates-B ... Rigging up.

Mid-Kansas and Transcontinental's No. 17 Yates-B ... Clearing location.

Mid-Kansas and Transcontinental's No. 3 Yates-C, Sec. 60, Blk. 1 ... Total depth 865 ft.; mud. 8-in.

Mid-Kansas and Transcontinental's No. 4 Yates-C ... Building road.

Mid-Kansas and Transcontinental's No. 5 Yates-C ... Drilling 350 ft.

*Mid-Kansas and Transcontinental's No. 1 Yates-D, SW part Sec. 62, Blk. 1 ... Digging cellar.

Mid-Kansas and Transcontinental's No. 6 Yates-C ... Rigging up.

Mid-Kansas and Transcontinental's No. 7 Yates-C ... Drilling 1,302 ft.; flowed 4,842 bbls.

Mid-Kansas and Transcontinental's No. 2 Yates-D, SW part Sec. 62, Blk. 1 ... Cellar; waiting for machine.

*Mid-Kansas and Transcontinental's No. 1 Yates-E, C W Sec. 59, Blk. 1 ... Spudded Nov. 11.

Mid-Kansas and Transcontinental's No. 3 Smith-Taylor, Sec. 33, Blk. 194 ... Drilling 1,215 ft.; show gas.

Mid-Kansas and Transcontinental's No. 4 Smith-Taylor, Sec. 33, Blk. 194 ... Drilling 500 ft.

Mid-Kansas and Transcontinental's No. 5 Smith-Taylor ... Drilling 100 ft.

Mid-Kansas and Transcontinental's No. 6 Smith-Taylor.. Rigging up.
•Mid-Kansas and Transcontinental's No. 1 M. A. Smith, Sec. 31, Blk. 194 ..... Total depth 1,565 ft.; moving boiler back.
•Red Bank Oil Co.'s No. 2 Smith, Sec. 24, Blk. 194 ..... Show gas 1,019-27 ft.; drilling 1,460 ft.
•Roxana Pet. Corp.'s No. 2 Tippett, Sec. 102, Blk. 194 .... Drilling 1,402 ft.; made 80 bbls.
•Roxana Pet. Corp.'s No. 3 Tippett, Sec. 102, Blk. 194 .... Drilling 680 ft.
Roxana Pet. Corp.'s No. 4 Tippett ..... Digging cellar.
Roxana Pet. Corp.'s No. 2 Smith, SE cor. SW Sec. 27, Blk 194 ..... Drilling 730 ft.
Simms Oil Co's No. 3 Smith, Sec. 103, Blk. 194 ..... Drilling 200 ft.
Simms Oil Co.'s No. 4 Smith, Sec. 103, Blk. 194 ..... Spudded 65 ft.
Kirby Pet. and Roxana's No. 1 Tippett ..... Drilling 565 ft.

PRESIDIO COUNTY

Headlock & Miller's No. 1 Tootle Est., Sec. 123, Blk. 3, D. & P. Sur., elev. 2,912 ft. ..... **Salt water 2,610 ft.; total depth 3,003 ft.; shut down for orders.**
Pinto Canyon Oil Co.'s No. 1 Fields, 1,760 ft S and E NW cor. Sec. 74, Blk. 3, D. & P. Sur. ..... Location.

REAGAN COUNTY

Henshaw & Camp's No. 1 University, Sec. 14, Blk. 49, University Land, elev. 2,772 ft. ..... **250 ft. sulphur water at 800 ft.;** shut down 2,075 ft. for 8-in. casing.
Skelly Oil Co.'s No. 1 University, SW cor. Sec. 33, Blk. 8, University Land ..... Top salt 1,340 ft.; drilling 1,610 ft.
Texon O. & L. Co.'s No. 1-B University, Group 1 ..... **Top pay 6,284 ft.; total depth 6,590 ft.; 3,800 ft. of 38.7 gravity oil in hole; underreaming.**
White et al's No. 1 Shofner & Sterling, SE cor. NW Sec. 10, 2 m. N of Big Lake ..... Drilling 550 ft.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 400 ft.
Grisham-Hunter Corp.'s No. 1 Rathge & Connor ..... Moving in machine.
David R. Thompson's No. 1 A. A. Eddins ..... Drilling 2,800 ft.
World Oil Co.'s No. 1 Biggs, C SE Sec. 65, Blk. 112, Public School Land Sur., elev. 3,068 ft. ..... **Shut down 1,610 ft.**
World Oil Co.'s No. 1 Duff, elev. 2,753 ft. ..... Top Delaware lime 4,185 ft.; hole full brackish salt water 4,368-4,500 ft.; will plug back and shoot.

RUNNELS COUNTY

Empire G. & F. Co.'s No. 1 C. C. Clay ..... Spudding 180 ft.
Gibson & Johnson's No. 1 Harris Est., Juliana Voske Cabrera Sur. ..... Location.
Gibson & Johnson's No. 1 H. P. Serratt, C SE NW Sec. 160, E. T. R. R. Sur. ..... Location.
Kennedy et al's No. 1 J. E. Tally ..... Drilling 1,460 ft.
May et al's No. 1 J. M. Schneider, John Wall Sur. ..... Drilling 1,015 ft.
Miles Oil Co.'s No. 1 Charles Ray, Sec. 21, T. & N. O. Sur. ..... Cellar.
Miles Oil Co.'s No. 1 L. S. Lawhon, NE cor. Sec. 68 .. Show gas 960-80 ft.; drilling 2,100 ft.
Noble O. & G. Co.'s No. 1 Sims, Sec. 12, J. J. McHenry Sur. ..... **Hole full sulphur water 2,710-20** ft.; total depth 2,720 ft.; run. 6-in.
Swensondale Oil Co.'s No. 1 E. A. Werner ..... Drilling 1,380 ft.
Owenwood Oil Corp.'s No. 1 H. B. Fowler ..... Location.

SCHLEICHER COUNTY

Beavers & Leath et al's No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. ..... **Shut down 400 ft.**
Thomas Grey et al's No. 1 Ball Robinson, C NW Sec. 35, Blk. M, G. H. & S. A. Sur. ..... **Sulphur water 2,125 ft.; hole full water 2,160-80 ft. and 2,925 ft.; shut down for orders 3,004 ft.**

SCURRY COUNTY

J. B. Mims et al's No. 1 J. J. Koonsman, Sec. 220, Blk. 3, H. & T. C. Sur. ..... Location.

STERLING COUNTY

Orr et al's No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W. & N. W. Sur. ..... Shut down 1,390 ft.; (corrected).

STONEWALL COUNTY

Peer Oil Corp. and Producers Oil Co.'s (was J. P. Johnson's) No. 1 R. P. Morrow ..... Hole full water 2,625-90 ft.; set 10-in. 2,700 ft.; drilling 2,930 ft.

TAYLOR COUNTY

A. J. Brown et al's No. 1 Hensley, NE cor. Sec. 5, Blk. 4, S. P. R. R. Sur. ..... Total depth 2,235 ft.; rigging up.
Deming & Perrine's No. 1 J. A. Hammer, C N 160 acres, Sec. 33, Blk. 19, T. & P. Sur., elev. 1,904 ft. ... **Shut down 455 ft.**
Gilbert Johnson and Day Bros.' No. 1 C. M. Brown, Sec. 1, Blk. 6, T. & P. Sur. ..... Spudded and shut down.
Owen & Sloan's No. 1 Lattimer, Sec. 14, Blk. 9, T. & P. Sur. ..... **Shut down 2,605 ft.**
Reeser & Pendleton's No. 1 Sam Hutman, C W half NW Sec. 64, Blk. 5, T. & P. Sur. ..... Water sand 2,222 ft.; fishing 2,714 ft.
Simmons et al's No. 1 ..... Souddeing 50 ft.
Layne-Tex Oil Co.'s No. 1 ..... Rigging up standard tools.

TERRELL COUNTY

Milham Exploration Co.'s No. 1 Bassett, CNL Sec. 99, Blk. Y, W. H. Robertson Sur. ..... Rig on ground.

TERRY COUNTY

Kingsland O. & P. Co.'s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. R. R. Sur. ..... **Slight show gas 2,230 ft.; shut** down 3,207 ft. (S. L. M. corrected); contract completed.

TOM GREEN COUNTY

George Amery's No. 1 Wilkey, C SW Sec. 3, B. A. L. Sur. ..... Location.
Cox et al's No. 1 Llano ..... Total depth 470 ft.; underreaming casing.
Fitzgerald et al's No. 1 Bennett ..... Drilling 1,625 ft.
Marland Oil Co.'s No. 1 J. W. Johnson, C SE, Sec. 6, R. B. Sanderson Sur. ..... Drilling 1,425 ft.
Marland Oil Co.'s No. 1 J. W. Johnson-A ..... Drilling 35 ft., cable tools.
Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 103, Blk. 11, H. P. R. R. Sur. ..... Fishing tools 300 ft.

UPTON COUNTY

Eastland Oil Co. and Brandon & McCamey's No. 1 Union Land, Sec. 34, Blk. 1, M. K. T. Sur. ..... Top salt 570 ft.; top lime 2,000 ft.; top pay 2,125 ft.; 5 bbls. oil daily; hole full sulphur water 2,178-2,222 ft.; will plug.
Mark Curtis et al's (was Hultz et al's) No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton Co. School Land, League 1, elev. 2,757 ft ..... **Spudded and shut down**
Skelly Oil Co.'s No. 2 J. F. Lane, SW cor. SE SE Sec. 3, G. C. & S. F. Sur. ..... Spudding.
Southern C. O. P. Co.'s No. 1 C. W. Hobbs ..... Drilling 350 ft.
The Texas Company and Cordova Union's No. 1 Union Land, Sec. 33, Blk. 35, H. & T. C. ..... Top salt 580 ft.; drilling 1,720 ft.
Tulsa Drlg. Co.'s No. 1 W. A. Chaney, Sec. 18, Blk. 3, M. K. T. Sur. ..... Top salt 670 ft.; drilling 1,120 ft.
Wise & Jackson's No 1 J. H. Porter, SW cor. SW SW Sec. 184, Blk. E, elev. 2,592 ft. ..... **Top pay 2,419 ft.; total depth 2,511** ft., gray lime; **shut down.**

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore Est., Sec. 183, J. Mitchell Sur., elev. 953 ft. ..... **Shut down 3,000 ft.**
Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. ..... **Shut down 2,940 ft.**
Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. ..... Drilling 3,855 ft.
East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur., elev. 941 ft. ..... **Total depth 3,190 ft.; shut down**
Magnolia Pet. Co.'s No. 1 Whitehead, Sec. 81, D. G. C. & S. F. Sur., elev. 1,770 ft. ..... Drilling 4,675 ft.
Independent Operators' No. 1 Whitehad, SE SE Sec. 30, Blk. 4, I. & G. N. Sur., elev. 1,175 ft. ..... **Shut down 3,000 ft.**
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I. & G. N. Sur., elev. 2,130 ft. ..... **Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511** ft.; total depth 2,680 ft.; prepare to resume drilling.

WINKLER COUNTY

Amerada Pet. Corp.'s No. 1 J. B. Walton, SW cor. NW Sec. 48, Blk. 36, elev. 2,833 ft. ..... Top salt 1,086 ft.; 2,500,000 ft. gas 1,700-08 ft.; killed gas with 1½ tons baroid; cored brown lime carrying oil 2,334 ft.; cem. 8-in.; standardizing.
Atlantic O. P. Co.'s No. 1 Ida Hendrick, SE cor. W half NE Sec. 44, Blk. 36 ..... Total depth 2,727 ft.; cementing 8-in.; standardizing.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter, Sec. 34, Blk. B-5, elev. 2,823 ft. ..... Flowed 1,681 bbls. 2,826-88 ft.
Atlantic O. P. Co.'s No. 2 Grisham-Hunter ..... Cem. 8-in. 2,514 ft.; standardizing.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter-C (was Lemar) ..... **Total depth 2,130 ft.; cemented** 8-in.; rigging rotary.
Atlantic O. P. Co.'s No. 1 Ida Hendrick-D ..... Drilling 1,210 ft.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter-E ..... Drilling 915 ft.
V. T. Bolin et al's No. 1 Brown ..... Rigging cable tools.
Magnolia Pet. Co.'s (was G. M. Church et al's) No. 1 Ida Hendrick, Sec. 39, Blk. B-5 ..... Drilling 2,590 ft.; 1,000,000 ft gas 2,560 ft
Magnolia Pet. Co.'s (was G. M. Church et al's) No. 2 Ida Hendrick ..... Drilling 2,475 ft
Magnolia Pet. Co.'s No. 3 Ida Hendrick ..... Building rig.
Cranfill Bros. and California Co.'s No. 1 M. J. Bashara, at cor. Secs. 10, 11, 22 and 23, School Blk. 77 ..... Drilling 3,240 ft.
Cranfill & Reynold's No. 2 Ida Hendrick-A, C SE NW NW Sec. 28, Blk. B-5 ..... Drilling 2,665.
Cranfill & Reynold's No. 1 Grisham-Hunter-B, Sec. 35, Blk. B-5 ..... **Drilling 200 ft.**
Eastland Oil Co. and Arnold's No. 1, Sec. 35, Blk. B-5 ... Drilling plug 2,340 ft.
Gulf Prod. Co.'s No. 6 T. G. Hendrick, NE cor. NW Sec. 34 ..... Drilling 2,620 ft., brown lime; 1,000,000 ft. gas.
Gulf Prod. Co.'s No. 7 T. G. Hendrick, SE SW NW Sec. 34, Blk. B15 ..... Top gray lime 2,768 ft.; top pay 2,790 ft.; drilling 2,849 ft., brown lime.
Humble O. & R. Co.'s No. 1 T. G. Hendrick, NW cor. NE Sec. 34, Blk. B-5, Public School Land, elev. 2,816 ft. ..... Total depth 2,763 ft.; fished out one bit; gas which had been killed broke loose again.
Humble O. & R. Co.'s No. 2 T. G. Hendrick, SE cor. NE Sec. 34, Blk. B-5, elev. 2,824 ft. ..... 75,000,000 ft. gas 2,580 ft.; shut down; temporarily completed as gas well; top of gas 2,385-90 ft.
Humble O. & R. Co.'s No. 3 Hendrick, Sec. 34, Blk. B-5.. 5,000,000 ft. gas from 2,194 ft., total depth 2,370 ft.; fishing drill stem.
Humble O. & R. Co.'s No. 4 Hendrick, Sec. 34 ..... 5,000,000 ft. gas from 2,252 ft. 15,000,000 ft. at 2,667 ft.; total depth 2,815 ft.; trying to kill gas; total amount 40,000,000 ft.
Humble O. & R. Co.'s No. 5 Hendrick, Sec. 34, Blk. B-5.. Location; temp. abd.
Humble O. & R. Co.'s No. 1 Ida Hendrick-B ..... Drilling 1,520 ft.
Humble O. & R. Co.'s No. 2 Ida Hendrick-B ..... **Rig on ground.**
Humble O. & R. Co.'s No. 3 Ida Hendrick-B ..... Drilling 230 ft.
Independent O. & G. Co.'s No. 1 J. S. Howe-D, NE cor. W half SE Sec. 44, Blk. 36 ..... Total depth 2,729 ft.; cem. 8-in.
Independent O. & G. Co.'s No. 1 Hendricks-A, elev. 2,816 ft. ..... 250,000 ft. gas 2,555-75 ft.; 18 bbls. water 2,770-75 ft. and show oil; 200 ft. oil in hole; shut down 2,845 ft.
Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,823 ft. ..... **Show gas 2,620 ft.; shut down** 2,740 ft.
Independent O. & G. Co.'s No. 1 Vardeman-B ..... Shut down 345 ft. for water.
Independent O. & G. Co.'s No. 2 Vardeman-B ..... Cellar.
Liner Drlg. Co.'s No. 1 Seth-Campbell, NE cor. Sec. 3, Blk B-5 ..... **Shut down 450 ft.**
Landreth Prod. Corp.'s No. 1 Hendrick-A, SE cor. SW Sec. 29, Blk. B-5 ..... Top lime 2,662 ft.; show oil 2,688 ft. and 2,875 ft.; 1,400 ft. oil 2,925 ft.; 200 ft. sulphur water 3,009-13 ft.; water exhausted later to 1 baller per hour; shut down.
Landreth and Roxana's No. 2 Ida Hendrick-A, Sec. 29, Blk. B-5 ..... **Part rigged and shut down.**
Landreth and Roxana's No. 3 Ida Hendrick-A, Sec. 29, Blk. B-5 ..... **Part rigged and shut down.**
Landreth and Roxana's No. 4 Ida Hendrick-A ..... Drilling 2,530 ft.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 1 Grisham-Hunter-B ..... Location.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 2 Grisham-Hunter-B ..... Drilling 2,882 ft.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 3 Grisham-Hunter-B ..... Showing oil 2,630 ft.; total depth 2,427 ft.; tore down standard rig; standing cemented.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 4 Grisham-Hunter-B ..... Drilling 1,075 ft.
Mining & Engineering Co.'s No. 1 T. G. Hendrick, Sec. 10, Blk. B-12 ..... Rig.
R. S. Matthews et al's No. 1 State, C Sec. 7, Blk. A-57, Public School Land Sur., elev. 3,128 ft. ..... Small show oil 3,890-3,900 ft.; drilling 3,980 ft.
Murchison Oil Co. and Cranfill Bros.' No. 2 Grisham-Hunter ..... Location.
Murchison Oil Co. and Cranfill Bros.' No. 4 Grisham-Hunter ..... Location.
Pure Oil Co.'s No. 2 Hendrick, elev. 2,827 ..... Top salt 1,518 ft.; top lime 2,290 ft.; made 20-bbl. head at 2,625-43 ft.; 1,200 ft. oil in hole 2,657-80 ft.; rigging up to drill in.
Pure Oil Co.'s No. 3 Hendrick, NE cor. SW Sec. 41, Blk. B-5 ..... Top salt 1,497 ft.; drilling 2,150 ft.
Pure Oil Co.'s No. 1 Hendrick-B, NE cor. SE Sec. 34, Blk. B-5 ..... Show gas 2,350-60 ft.; show oil 2,380 ft.; 15,000,000 ft. gas at 2,490 ft.; more gas 2,564 ft.; total depth 2,700 ft.; run. 5-in.
Pure Oil Co.'s No. 2 Hendrick-B ..... Top lime 2,387 ft.; standardized 2,387 ft. and shut down.
Pure Oil Co.'s No. 3 Hendrick-B ..... Cem. 8-in. 2,438 ft and shut down.
Pure Oil Co.'s No. 4 Hendrick-B ..... Location.
Republic Prod. Co.'s No. 1 Grisham-Hunter-A, NW cor. E half SW Sec. 45, School Block 36 ..... Top lime 2,125 ft.; some gas; cem. 6-in. 2,740 ft.
Republic Prod. Co.'s No. 1-A Grisham-Hunter-B, SW cor. E half SE Sec. 41, Blk. B-5 ..... Total depth 1,250 ft.; trying to kill gas.
Republic Prod. Co.'s No. 2 Grisham-Hunter-B ..... Cem. 8-in. 2,011 ft.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-A, SW cor. E half NW Sec. 45, School Blk. 36 ..... Top lime 2,428 ft.; little gas; show oil and gas 2,570 ft.; increase gas at 2,597 ft.; spraying oil 2,760-65 ft.; 40,000,000 ft. gas 2,800-01 ft.; blew tools up in hole.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-B, SW cor. S half SE Sec. 29, Blk. B-5 ..... Top lime 2,657 ft.; show oil and gas 2,630 ft.; shut down 3,002 ft.
Roxana Pet. Corp.'s No. 2 Grisham-Hunter-B, NW cor. S half SE Sec. 29, Blk. B-5 ..... Pits dug; moved off material.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-C, NW of Sec. 29, Blk. B-5 ..... Drilling 2,775 ft.; 1,000 ft. oil in hole; top pay 2,692 ft.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-D, SW cor. S half NE Sec. 41, Blk. B-5 ..... Drilling 2,252 ft.
Roxana Pet. Corp.'s No. 2 Grisham-Hunter-D ..... Location.
Sheldon & Burden's No. 1 Ida Hendrick, SW cor. SE Sec. 28, Blk. B-5 (10-a. tract) ..... Drilling 300 ft.
Southern C. O. P. Co.'s No. 2 T-67 Hendrick-C, SE cor. NE Sec. 33, Blk. B-5, elev. 2,816 ft. ..... Total depth 2,735 ft.; rigging up to drill in.
Southern C. O. P. Co.'s No. 4 T-67 Hendrick-C, elev. 2,810 ft. ..... Total depth 2,740 ft.; making 1½ bbls. oil daily from 2,735 ft.; rigging up to drill in.

Southern C. O. P. Co.'s No. 2 Ida Hendrick T-88-B ..... Total depth 2,659 ft.; cem. 6-in. in lime; tearing down rotary.

Southern C. O. P. Co.'s No. 1-F Hendrick, Sec. 33, Blk. B-5, NE cor. SE ..... Show oil 2,653 ft.; 2,000,000 ft. gas and show oil 2,724 ft.; drilling 2,835 ft.

Southern C. O. P. Co.'s No. 1 T-89 Grisham-Hunter-A, CWL NE SW Sec. 35, Blk. B-5, elev. 2,816 ft. ..... Top salt, 1,219 ft; top lime, 2,298 ft.; 10,000,000 ft. gas 2,473-75 ft.; 3,000,000-ft. increase at 2,485 ft.? spraying oil from 2,665 ft.; drilling 2,685 ft.

Southern C. O. P. Co.'s No. 2 T-89 Grisham-Hunter-A, Sec. 35, Blk. B-5 ..... Building rig.

Texon O. & L. Co.'s No. 2 Grisham-Hunter-A ..... 5,000,000 ft. gas 2,260-2,500 ft.; shut down for orders 2,644 ft.

Texon O. & L. Co.'s No. 3 Grisham-Hunter-A, NW cor. W half SE Sec. 41, Blk. B-5 ..... Drilling 1,315 ft.

Texon O. & L. Co.'s No. 1 Grisham-Hunter-B, NW cor. W half SW Sec. 45, School Blk. 26 ..... Shut down 1,150 ft. to install rotary.

Texon O. & L. Co.'s No. 2 Grisham-Hunter-B ..... Spudded and shut down.

White Eagle O. & R. Co.'s (was Gibson & Johnson's) No. 1 P. A. Lock, 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well, elev. 2,830 ft. ..... Total depth 3,260 ft.; cementing; tools and bailer in hole.

Southern C. O. P. Co.'s No. 1 Ida Hendrick 3-T-67-A, C SW NW NE Sec. 4, Blk. B-12, elev. 2,784 ft. ..... Top lime 2,638 ft.; slight show oil 3,000-08 ft.; filled up 1,500 ft. sulphur water at 3,065-72 ft.; plugged back to 3,050 ft. and shut off water; tore down tools.

Southern C. O. P. Co.'s No. 2 Ida Hendrick 3-T-67-A .... Standing cemented 2,646 ft.; tore down rotary.

Southern C. O. P. Co.'s No. 1 T-67 Hendrick-B, NE cor. SE Sec. 24, Blk. 26 ..... Top salt 2,210 ft.; top lime 2,645 ft.; total depth 2,648 ft.; rigged tools and shut down.

Tidal Oil Co.'s No. 1 J. W. Amburgey, C Sec. 24, Blk. B-7, Public School Land, elev. 2,992 ft. ..... Top salt 1,220 ft.; ½ bailer sulphur water per hr. 4,308 ft.; 2 bailers hr. 4,440 ft.; drilling 4,740 ft.

Southern C. O. P. Co.'s No. 1 Hendrick 3-T-68-A, SW cor. W half NW Sec. 35, Blk. B-5 ..... Top salt 1,365 ft.; top lime 2,30? ft.; top pay 2,440 ft.; drilling 2,578 ft.; makes 20-bbl. head every day.

Southern C. O. P. Co.'s No. 2 Hendrick 3-T-68-A ..... Standardized 2,288 ft. and shut down.

Southern C. O. P. Co.'s No. 3 Hendrick 3-T-68-A ..... Cem. 8-in. 2,118 ft.

Southern C. O. P. Co.'s No. 2 T-88 Hendrick-C, Sec. 28, Blk. B-5 ..... Cem. 6-in. 2,435 ft.; will standardize.

Southern C. O. P. Co.'s No. 1 T-88 Ida Hendrick-C, NW cor. Sec. 28, Blk. B-5 ..... Drilling 2,675 ft.; show gas 2,665 ft.

Southern C. O. P. Co.'s No. 3 Ida Hendrick, T-88-C ..... Drilling 2,475 ft.

Southern C. O. P. Co.'s No. 4 Ida Hendrick, T-88-C ..... Moving in rotary.

Southern C. O. P. Co.'s No. 5 Ida Hendrick, T-88-C ..... Rigging up rotary.

Southern C. O. P. Co.'s No. 6 Ida Hendrick, T-88-C ..... **Rigging up rotary.**

Turman & Maxwell's No. 1 Ida Hendrick ..... Drilling 2,725 ft.; no oil or gas.

Turman & Maxwell's No. 2 Ida Hendrick ..... Top salt 1,223 ft.; drilling 2,275 ft.

Southern C. O. P. Co.'s No. 1 Ida Hendrick, T-88-G, SW SE Sec. 28, Blk. B-5 ..... Moving in material.

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 46)

Delaney et al's No. 2 Jackson ..... Drlg., 875 ft.

Edwards et al's No. 1 E. J. Case, NE cor. Sec. 182, Blk. B-2, H. & G. N. Sur. ..... 70,000,000 ft. gas, 2,512-2,630 ft; drlg., 2,930 ft.

Empire G. & F. Co.'s No. 1 Sarah George, Sec. 151, Blk. 3, I. & G. N. Sur. ..... 10,000,000 ft. gas, 3,080-3,130 ft; show oil, 3,130 ft; cmt. 6-in.

Empire G. & F. Co.'s No. 1 J. F. Meers ..... Drlg., 3,265 ft.

Gardner et al's No. 1 G. H. Saunders ..... New location.

Gibson Oil Corp.'s No. 2 J. B. Bowers ..... Lost hole, 2,910 ft; skidded rig; drlg., 460 ft.

Gurnsey Oil Co.'s No. 1 B. E. McKinney ..... Drlg., 450 ft.

Lefors Pet. Co.'s No. 1 Leach, Lefors Townsite ..... 10,000,000 ft. gas, 2,440-50 ft; 70,000,000 ft. gas, 2,625 ft; T.D., 2,650 ft; trying to pull 8-in. and it parted.

H. C. McCauley et al's No. 1 J. Morse, Sec. 2, Blk. 46, H. & G. N. Sur. ..... Drlg., 1,490 ft.

Magnolia Pet. Co.'s No. 1 J. Bowers ..... Spudded.

Midwest Explin. Co.'s No. 1 J. Bowers ..... Drlg., 580 ft.

Navillus Oil Co.'s (was Sullivan et al's) No. 1 fee, NW cor. E ½ SW, Sec. 1, Blk. 1, A. C. H. & B. Sur. ..... 3,000,000 ft. gas, 2,170-80 ft; 30,000,000 ft. gas, 2,240-90 ft; 15,000,000 ft. gas, 2,370-90 ft; show oil 2,601-08 ft; drlg., 2,637 ft.

Neudigate et al's No. 1 A. Chapman, NE cor. E ½ SE, Sec. 52, Blk. 25 ..... 500,000 ft. gas, 2,760-65 ft; rainbow of oil, 2,820-25 ft; salt water; granite wash, 2,2827-28 ft; S.D., 2,835 ft.

Operators Oil Co.'s No. 1 Jackson ..... Drlg., 2,500 ft., 1,000,000 ft. gas at 2,465 ft.

Operators Oil Co.'s No. 2 Bowers, NE cor., Sec. 35, Blk. 3, I. & G. N. Sur. ..... Show oil, 3,097 and 3,181 ft; and 3,313 ft; drlg., 3,400 ft.

Phillips Pet. Co.'s No. 1 W. Jackson (was Clark et al's No. 2) ..... Drlg., 1,160 ft.

Phillips Pet. Co.'s No. 2 W. Jackson (was Clark et al's No. 3) ..... Drlg., 1,015 ft.

Phillips Pet. Co.'s No. 3 W. Jackson ..... Spudded.

Phillips Pet. Co.'s No. 1 Jackson-Riley (was Clark et al's No. 1 W. Jackson) ..... Drlg., 2,550 ft; 7,000,000 ft. gas, 2,442-2,545 ft.

Phillips Pet. Co.'s No. 2 Jackson-Riley ..... T.D., 400 ft; froze 15-in.

Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3 .. 700 ft. water, 3,430 ft; S.D.

Purple Sage Oil Co.'s No. 2 E. B. Johnson ..... Material on ground.

Remo Oil Co.'s No. 1 B. E. McKinney ..... Location.

Rensoul Pet. Co.'s (was Salisbury & Reynolds') No. 1 M. Huselby, C SE NE NE, Sec. 55, Blk. 25, H. & G. N. Sur. ..... Flowing 30 bbls. daily; T.D., 2,959 ft; fish, 2 strings tools.

C. B. Shafer's No. 1 G. Cole ..... S.D. for orders, 3,313 ft.

Shamrock Pet. Co. et al's No. 1 J. B. Back, SE NW SW, Sec. 44, Blk. 25 ..... T.D., 2,335 ft; rig burned and rebuilt; 30,000,000 ft. gas.

Skelly Oil Co.'s No. 1 W. Jackson ..... Drlg., 115 ft.

Skelly Oil Co.'s No. 2 Jackson ..... Spudded.

Spartan Oil Co.'s No. 1 J. Hopkins ..... New location, rig on ground.

Sullivan et al's No. 1 A. Chapman ..... Rig on ground.

Sullivan et al's No. 1 A. Chapman-A ..... Rig; moving in tools.

Sun Oil Co.'s No. 1 W. Jackson ..... New loc., cellar.

Staggers Oil Co.'s (was Ruby Oil Co.'s) No. 1 B. F. Tally T.D., 635 ft; S.D.

The Texas Company's No. 1 J. B. Bowers ..... Drlg., 510 ft.

The Texas Company's No. 2 J. B. Bowers ..... Spudding.

The Texas Company's No. 3 J. B. Bowers ..... Rig.

The Texas Company's No. 1 S. McLarty ..... Cellar.

The Texas Company's No. 4 G. H. Saunders ..... Rigging up.

The Texas Company's No. 1 A. Chapman, Sec. 51, Blk. 25 Drlg., 2,190 ft.

The Texas Company's No. 1 W. J. Brown ..... 1,000 ft. wtr., 3,540-45 ft; T.D., 3,630 ft; to plug back.

J. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ..... Rig on ground.

Young et al's No. 1 Holmes ..... S.D., 3,352 ft; 2,000 ft. oil in hole (was comp. in Oct., 1926, for 300 bbls. at 3,165-80 ft).

HALE COUNTY

Bailey & Young's No. 1 Thomas, Sec. 1, Blk. J.K.L. ..... S.D., 175 ft.

Donnell Pet. Co.'s No. 2 Mullican, NW cor. Sec. 66, Blk. A-3, I. & S. B. Sur. ..... Top pay in sandy shale, 405 ft; ½ bailer oil and 3 bailers wtr. per day; S.D., 260 ft.

Donnell Pet. Co.'s No. 1 Mullican, C Sec. 21, Blk. B, R. M. Thompson Sur. ..... 200 ft. fluid in hole from 407-14 ft; S.D.

Explin. Co.'s No. 1 Crawford, C NE, Sec. 17, Blk. C-3, T. T. R. R. Sur. ..... Spudded and S.D.

Explin. Co.'s No. 1 Goodman ..... Spudded and S.D.

A. S. Mimm's No. 1 W. A. Ritcher, 700 ft. from east line and 1,200 ft. from south line, Sec. 17, Blk. X, John Glynn Sur. ..... S.D., for underreamer at 1,100 ft.

Tolbert & Simms' (was Gouldy & Stone's) No. 1 Kitteral, SE cor. NW, Sec. 65, Blk. A-3, G. C. & S. F. Sur. ..... S.D., 485 ft.

HALL COUNTY

Briscoe Oil Assn.'s (was Seifert et al's) No. 1 Owens, C NE, Sec. 179, Blk. S-5, Dennison & Pacific Sur. .. Spudded and S.D.

HANSFORD COUNTY

Caldwell et al's No. 1 J. Adriance est. ..... Rigged up and S.D.

Oklavania et al's No. 1 Coots, Sec. 13, Blk. 45, H. & T. C. Sur. ..... S.D., 560 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood ..... Drlg., 1,280 ft.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9, Blk. 2 ..... Preparing to abandon at T.D., 4,038 ft.

Eslick et al's No. 1 J. R. Irving, Sec. 13, Blk. 13 ..... Topped granite wash, 3,103 ft; show oil, 3,226 ft; hole full wtr., 3,745-55 ft; S.D., 3,955 ft.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 ..... Spudded and S. D.

Hoover et al's No. 1 fee, J. S. Hood Sur. ..... Fish. liner, 4,771 ft; bailing.

HUTCHINSON COUNTY

R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 ..... Rig.

Beam et al's No. 1 Cockrell, Sec. 3, Blk. 23 ..... S.D., 405 ft. for orders.

Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y ..... S.D., 750 ft.

Conklin et al's No. 1 Johnson, Sec. 1, Blk. X03, H. & O. B. Sur. ..... S.D., 600 ft.

McMan O. & G. Co.'s No. 1 Albert Yake ..... Drlg., 950 ft.

Phillips Pet. Co.'s No. 12 Elva-Whittenburg, E. Tomlinson Sur. ..... S.D. for orders, 4,445 ft.

Phillips Pet. Co. & White Eagle O. & R. Co.'s No. 1 Lee Bivins ..... Drlg., 2,660 ft.

Prairie O. & G. Co.'s No. 1 Burnett est. ..... Drlg., 2,100 ft.

Prairie O. & G. Co. and Vacuum Oil Co.'s No. 2 Cal Merchant ..... Spudding.

Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson ..... T.D., 2,640 ft., fishing.

The Texas Company's No. 1 Ellis Cockrell, Sec. 1, Blk. Y ..... T.D., 4,512 ft; plugging to abandon.

The Texas Company's No. 1 Cockrell-B ..... Drlg., 720 ft.

The Texas Co.'s No. 1 T. D. Lewis ..... Cleaning out at 3,020 ft.

Timms et al's No. 1 C. R. Garner ..... Spudding.

KING COUNTY

Humble O. & R. Co.'s No. 1 Pitchfork, Sec. 171, Blk. A-96, John H. Gibson Sur. ..... Drlg., 2,200 ft.

Midwest's No. 1 Patton ..... T.D., 3,475 ft., run 5-in. casing.

J. L. Pattison's No. 1 Patton ..... Slight show gas, 2,115-30 ft; drlg., 2,900 ft.

LAMB COUNTY

Dan Freel et al's No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Building rig.

Tolbert & Simms' No. 1 Ellwood, NE SW SW, Sec. 14, Blk. B., R. M. Thompson Sur. ..... S.D., 712 ft; small show oil and hole full wtr; bailing.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE, Sec. 899, Blk. 43, H. & T. C. Sur. ..... Spudded and S.D.

Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 ..... S.D., 1,400 ft.

McCorkle's No. 1 A. Barton, NE cor. SW SE, Sec. 504, Blk. 43, H. & T. C. Sur. ..... Water in lime at 4,126-40 ft; 6-in. set, 4,155 ft; drlg., 4,330 ft.

Ozark Drlg. Co.'s No. 1 Frass, NE SE, Sec. 106, Blk. 10, H. & T. C. Sur. ..... Rig on ground.

Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 ..... Show oil, 3,520 ft; salt water at 3,900 ft; S.D.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles ranch ..... Small show oil, 1,133-40 ft., in sand; drlg., 1,490 ft.

MOORE COUNTY

A. O. Duggan's (was Shadler Bros.') No. 1 John Lowery, Sec. 237, Blk. 44 ..... Topped lime, 2,680 ft; set 8-in. at 2,770 ft; 4,000,000 ft. of gas, 2,980-3,020 ft; 15,000,000 ft. gas 3,100-50 ft; (actual gauge); very slight show oil in lime; S.D., 3,652 ft.

Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21 .. Fish. lugs, 2,520 ft.

Skelly Oil Co.'s No. 1 Armstrong & Byrd ..... T.D., 3,294 ft. hole full wtr., 3,292-94 ft; plugging back to pay, 3,179-3,213 ft; averaged 60 bbls. daily past week.

MOTLEY COUNTY

Explin. Co.'s No. 1 Burleson ..... Spudded and S.D.

Explin. Co.'s No. 1 Tillson ..... S.D., 750 ft. for repairs.

Explin. Co.'s No. 1 Matador Land & Cattle Co., C SW, Sec. 37, John Gibson Sur. ..... S.D., 1,002 ft.

Wheeler et al's No. 1 C. D. Bird, C NE, Sec. 4, Blk. S, Stephens Sur. ..... Spudded and S.D.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landegrin, SE cor. NE SW, Sec. 46, League 310, Capital land ..... 1,900 ft. wtr., 4,085-93 ft; 1 bailer wtr. per hr. and light scum oil, 4,527 ft. (steel line meas.) cmt. 6-in., 4,442 ft; 2,000 ft. salt wtr., 4,850-56 ft; run. 5-in., 4,895 ft.

POTTER COUNTY

Amarillo Oil Co.'s No. 1-B Masterson, Sec. 43, Blk. G-M-3, G. & M. Sur. ..... 500,000 ft. gas, 1,750 ft; 50,000,000 ft. gas, 2,030-2,140 ft; drlg., 2,350 ft.

Prairie O. & G. Co.'s No. 1 Lee Bivins ..... New location.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ..... Show gas, 4,990 ft; show oil, 4,992 ft; cas. set, 4,992 ft; S.D., 5,110 ft.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ..... 100,000 ft. gas, 2,016-26 ft; S. D. for 5-in. at 3,100 ft.

Phillips Pet. Co. and Prairie O. & G. Co.'s No. 1 Price & Fuqua, C NE, Sec. 33, Blk. 2-B, G. H. & H. Sur. .. 100,000 ft. gas, 2,105-10 ft; drlg., 3,060 ft.

WHEELER COUNTY

E. L. Arnold's No. 1 M. J. Williams ..... Show gas, 1,644 ft; T.D., 1,790 ft; S.D.

Byrens et al's No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H. & G. N. Sur. ..... T.D., 400 ft; S.D. for 10-in.

Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ..... Spudded; repaired rig.

Hatcher et al's No. 1 J. Hatcher, C NE SW, Sec. 80, Blk. 23, H. & G. N. Sur. ..... T.D., 1,460 ft; 1,000,000 ft. gas, cmt. 6-in.

Piney O. & G. Co.'s No. 1 W. S. Walker, Sec. 44, Blk. 24, H. & G. N. Sur. ..... Spudded second hole.

Rook & Angus' No. 1 Smock (Linkey) C SE SE Sec. 5, Blk. 24, H. & G. N. Sur. ..... Rigged up and S.D.

Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. A-4 ..... S.D., 2,120 ft. for orders.

The Texas Company's No. 1 Morgan, Sec. 92, Blk. 17 .... 21,000,000 ft. gas, 1,850-2,017 ft., S.D.

The Texas Company's No. 2 Morgan ..... Cellar.

Vaughan et al's No. 1 M. Ackley ..... New location.

Pete Woodley's No. 1 J. Boyle ..... New loc., rig.

EXPORT PURCHASES FEATURE MARKET

(Continued from Page 36)

EXPORT PURCHASES Feature Market as the winter season of lesser demand starts, or that prices will materially advance. Naphtha showed no change during the week.

Kerosenes and Distillates

A purchase of a large amount of 41-43 gravity kerosene by the Carson Petroleum Co. has stabilized that market and but little material is available at 4½ cents. There still is considerable material in storage however and prices remained unchanged but with any additional demands the market stands a good chance of advancing. The amount purchased by the Carson Petroleum Co. was reported to be 850,000 gallons in all and was made up of two purchases, one for 500,000 gallons and another for 350,000 gallons. Delivery of the material is said to extend until December 5. The purchase of the lower gravity kerosene has also strengthened the 42-grade and it was scarce at last week's prices.

Distillates improved in demand but this demand was intermittent and there was no change in prices. The higher gravity, low-flash material moved at a good rate. There were fewer demands for the heavier furnace oils in proportion to the lighter materials.

Fuel Oil and Gas Oil

Low gravity fuels were weak at last week's prices and sales were reported at lower prices in a few cases. The low cold test fuel was in fair demand and when the regular fuel oil was quoted the purchaser expected a premium. This tendency has been apparent over the past month and has been occasioned by the offering of Panhandle and West Texas fue's throughout the normal Group 3 marketing territory. As the production of cracked fuel has gradually increased, and as the carbon content of cracked fuels has been materially decreased through changes in the methods of operation, these low cold test fuels have proved very popular.

Most refiners blend the cracked and straight run fuels to make a relatively low cold test fuel, and because this practice simp'if.es operations, and because the product is more saleable, the production of the lower cold test fuels has come about naturally and the general market has adopted these as standard rather than the higher cold test straightrun fuels as originally. Another change has come about in the fuel market with respect to its classification and pricing, namely, the bulk of the fuel so'd is below 20 degrees gravity and much of it is 14 to 16 degrees gravity, while a relatively short time ago 20-gravity fuel was considered a heavy grade.

This change has been made possible by the perfection of burners and equipment to economically handle and burn the heavier oil. Then, in addition, there has been a change in certain fuel oil characteristics without a change in its gravity. As more cracked fuel was blended with the refinery fuel, the blend became less viscous even though the gravity remained the same. So as the cold test of the average fuel decreased, the viscosity decreased and improvements were made in the equipment used to handle and burn the fuel, the average gravity decreased.

As Panhandle and West Texas fuels enter into competition with the Oklahoma fuels, a variety of prices exists. While some fuel is being quoted at 70 cents out of Oklahoma as a result of this competition, it is very heavy and has a high cold test. Likewise, fuel is available in Oklahoma at 75 cents having a gravity range up to 20, whi'e the general market is from 2½ to 5 cents higher. This condition reflects the relative value of the high and low cold test fuels of the same gravity.

Gas oil did not change its position from that of last week and with l.ttle change seen in the gasoline market over the immediate future, there are but few inquiries for the material. Refiners who stored this material early in the year and who have curtailed cracking operations over the year are blend.ng a portion of their stocks with fuel oil whenever orders are received for high gravity fuels. This practice is tending to weaken the higher gravity fuels and the general trend is toward a smaller differential between the price of the low gravity fuels and the higher gravities.

If no change is seen in the gasoline market over the next few months, the higher gravity fuels will probably weaken in spite of the better demand that may result through their increased use as fuel in the larger office and household heating p'ants.

Lubricants and Wax

A variety of prices existed on lubricants, particularly the neutrals, and the general tone was none too firm. Bright stocks witnessed another price decline and some 150 viscosity D color bright stock was being offered at 23½ cents. There are so many plants making th's product now and the advantage of large quantity production is so great, the supply has been able to meet the demand readily even at the peak load during the summer, and now, as the demand for motor oils slackens, refiners are willing to shade their prices in order to maintain their vo'ume.

Cyl'nder stocks remained firm and, although a great difference in the quality exists, with a corresponding difference in prices, the prices were generally from 4 to 5 cents above fuel oil, and this has led to inquiries for the purchase of crude suitable for use in making steam refined stock. A premium of 10 to 25 cents for the crude may be justified on this basis. Wax shipments increased slightly and a better feeling existed regarding the future market. It is apparent no rapid advance is probable, for a sharp falling off in sales fol'owed the recent advance, but refiners are now confident also that prices will not witness a relapse.

GROGAN PRESiDENT OF LA.-ARK. DIVISION

(Continued from Page 42)

the legal committee was instructed to see what can be done to avoid this prosecution.

When production from an oil pool is flush, royalty incomes are high and there is little salt water agitation concerning the death rate among the piscatorial population of streams draining the field is a matter of little moment to farmers and others in the vicinity, but let production dwindle and royalty incomes along with it and it is not long before the oil industry is blamed for killing all the fish. It is nothing new, nor has any satisfactory method of avoiding it or convincing the layman that fish die from other causes than salt water been worked out.

The last instance of the sort in this division was in the case of Cotton Valley, where it was shown conclusively that fish mortal'ty was not due to salt water pollution of streams draining that area and now in the LaSalle Parish case it is by no means certain that fish in streams draining Urania and Little Creek Pools are being killed by salt water for as many fish in streams in which there is no oil field drainage are dying at the same rate. In the Cotton Valley case it was discovered that iron oxide used in rotary fluid was killing fish and not salt water draining into Dorcheat Bayou from the field. The Louisiana-Arkansas division of the Mid-Continent promptly got busy and devised a means of preventing this oxide getting into the streams and there hasn't been any complaint from that territory since. And, as in that case, the industry in this territory, through the division, is seeking to co-operate with the conservation department in determining the real cause of fish mortality in Little River and other streams draining Urania and Little Creek Pools and, after that, finding some means to avoid it if it is discovered that oil field pollution is really the cause, which is doubtful.

Another thing in which the industry, through the division, is seeking to be of service to the public is in the drafting of an ordinance prohibiting indiscriminate peddling of gasoline in small quantities from tank wagons in Shreveport. Two ordinances introduced by the city's public safety commissioner and adopted by the council have been held invalid by the courts for various reasons. The legal committee of the division has been instructed to prepare a new ordinance, one that will be as near puncture proof as possible, to be offered the commissioner for his approval and recommendation to the council.

Late Fields

(Continued from Page 48)

gassers in this area. It will further bolster the Magnolia's reserve for its North Louisiana-Waskom-Beaumont gas line and add to the company's position in the fight for prestige in this territory rapidly developing between it and the Dixie-Gulf gas interests.

GULF COAST

HOUSTON, Tex., Nov. 15.—Mills Bennett Petroleum Co.'s No. 1 Kirby, Barber Hill, Chambers County, was brought in flowing 1,500 bbls. of 26.5 gravity pipe line oil from a total depth of 5,468 feet. However a seal evidently gave way and sediment broke in. A string of 4½-inch casing was set to shut off the sediment but in swabbing the well back in the swab was lost in the hole and the well now is fishing. The well is on the east side of the dome in semiwildcat territory and is the deepest producer in that part of the Gulf Coast territory. While the well was flowing production was through a half-inch choke. The hole is 34 feet in the sand.

NORTH AND WEST TEXAS

(Continued from Page 48)

minutes. Total depth is 4,107 feet in sandy lime.

White Eagle Oil & Refining Co.'s No. 3 Casey was dry and abandoned at 1,657 feet. Allison's No. 1 Fender was also plugged and abandoned at 2,810 feet. Cunningham's No. 1 Jennings was plugged back from total depth of 1,516 feet to 1,130 feet, making 1,100,000 feet of gas from sand at 1,096-1,128 feet.

East'and County

Adams and others' No. 1 Nix was good for 1,000,000 feet of gas at 1,933-40 feet, total depth 1,946 feet. Hooser's No. 4 Fox pumped 100 bbls. from sand at 1,-619-21 feet, total depth 1,629 feet. Kokomo Petroleum Co.'s No. 1 Moats was dry and abandoned at 2,965 feet after shots of 100 and 20 quarts placed at 2,-903-45 feet and 2,817-37 feet respectively, failed to get results.

Parsons and others' No. 1 Blackwell was a 4,800,000-foot gasser at 3,103-35 feet; No. 2 Blackwell made 1,500,000 feet of gas from sand at 2,995-3,005 feet and made 5 bbls. of oil from sand at 3,-060-80 feet after a 40-quart shot.

Independent O'l & Gas Co.'s No. 3 Morgan was dry and abandoned at 3,585 feet. Lorenzen's No. 1 Qualls was a dry hole at 2,306 feet. McLester Oil Corp. and others' No. 4 Thorp, in the Ramsower Pool, which was completed about three weeks ago for 500 bbls. at 3,650-67 feet, was deepened 3 feet this week and increased to 1,195 bbls. Root and others' No. 3 Watson made 20 bbls. of oil and 5,000,000 feet of gas from sand at 3,730-40 feet, total depth 3,760 feet. It will be shot.

Palo Pinto County

Pender Production Co.'s No. 2 Rasmussen was temporarily abandoned at 4,-325 feet and No. 3 Slemmons at 3,600 feet.

DRILLING CREW INJURED

SHREVEPORT, La., Nov. 14.—Two men were killed, a third is expected to die and two others are in critical condition as the result of the explosion of the boiler on Woodley & Collins' No. 1 McVey location in Section 23-19-14, a Caddo Parish wildcat drilling at 1,700 feet. W. D. Woodley, driller, was on the derrick floor and escaped without injury, hurrying the others to a Shreveport hospital. Girard G. Ingersoll, Jr., of Shreveport, died as he reached the hospital while Charles J. McCarthy, of Castor, La., was killed instantly. R. E. Strange, of Colfax, La., is not expected to live while Paul Barnette, of Homer, and N. H. Patton, of Marshall, Tex., are expected to recover. Water getting too low in the boiler is given as the cause of the explosion.

AIR-GAS LIFT TESTS IN COLOMBIA FIELD

S. F. Shaw, consulting air-gas lift engineer, has left the Seminole, Okla. Field and sailed recently from New York for Colombia, South America. He goes to Colombia in the interests of the Standard Oil Co. of New Jersey, and will conduct a series of experiments with air lift equipment on various properties owned by subsidiary companies of the New Jersey company.

The compressors and other apparatus necessary for the conduct of these experiments have already been shipped, and Mr. Shaw will give special attention to the various fields of Colombia with a view towards trying to produce this oil by means of the air-lift system.

The producing formations in Colombia are found from 400 to 4,000 feet, and this great variation in depth will afford ample opportunity to test the efficiency of the air-lift in that country.

Although he was reticent regarding his trip, it is believed Mr. Shaw is of the opinion that the air-lift may be successfully applied to oil wells in any area regardless of the nature of the crude.

STATE AND SCHOOL LEASES

The Commissioners of the Land Office of the State of Oklahoma will receive sealed bids until 2 o'clock p.m., on November 29, 1927, for oil and gas leases on school and state lands as follows:

Lincoln County: Lots 1 and 2 and west half NW Section 36-13n-6e, 97.50 acres; Lots 3 and 4 and west half SW Section 36-13n-6e, 96.13 acres.

Oklahoma County: SE Section 36-11n-3w, 160 acres; NW Section 36-11n-3w, 160 acres.

Pottawatomie County: NE Section 16-11n-6e, 156 acres; SE Section 16-11n-6e, 160 acres; east half SW Section 16-11n-6e, 80 acres.

The commissioners will receive bids until 2 o'clock p. m., on December 6, 1927, for leases as follows:

Grant County: SE Section 36-28n-3w, 160 acres.

Oklahoma County: NE Section 16-11n-4w, 160 acres; SE Section 16-11n-4w, 160 acres.

The commissioners will receive bids until 2 o'clock p. m., on December 13, 1927, for oil and gas leases on the following school and state lands:

Caddo County: NW Section 13-10n-9w, 160 acres; SE Section 13-10n-9w, 160 acres.

Kingfisher County: SE Section 36-17n-8w, 160 acres.

PITTSBURGH TANK EXPLOSION

PITTSBURGH, Pa., Nov. 14.—More than a score were fatally injured, 500 wounded, and 50 are missing, following the explosion of a 5,000,000-foot natural gas tank of the Equitable Gas Co. on the north side, Pittsburgh, this morning. Property damage extended over a radius of a mile, factories and houses collapsing or being wrecked. The tank had been empty for months and was being repaired. It was described as the largest in the world.

There have been but two other gas tank explosions in this country, one at Houston, Tex., in 1910, and one at Columbus, Ohio, in 1919, no casualties being reported at either.

BUYS HUGHES PROPERTIES

HOUSTON, Tex., Nov. 14.—E. L. Smith Oil Co. has purchased practically the entire assets of J. K. Hughes Development Co., consisting of about 135,000 acres of wildcat and prospecting leases, together with producing acreage, scattered throughout Texas. There are 165 oil wells and numerous undrilled proven locations on the producing leases.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry. Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired. letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

LINERS FOR REFINERY APPARATUS

Have liners ever been successful in low or high pressure stills or other refinery apparatus for the prevention of corrosion? If so, of what material were the liners made and how attached to the still or pressure vessel? What seems to be the chief difficulties encountered with liners?—O.E.A.

Liners have been used to some extent in certain forms of towers, coke stills and engine cylinders. Some liners are made of the same material as the shell, others are built of cast iron. We are informed that liners, the metal of which is of the non-corrosive type, are being used in some cracking units. They are said to be especially successful in dephlegmator towers.

The method of attachment must be such that there is complete covering and this may be accomplished by flanging over the main shell.

The chief trouble which has been encountered with liners is the buckling that results from the unequal expansion and contraction. Leaks develop permitting oil and gas to get between the liner and the shell. Another difficulty is that which has been experienced by some in the cleaning operation; mechanical cleaners for the removal of coke beat upon the lining with such force that the metal wrinkles and gradually pulls away from the shell.

SULPHUR IN WEST TEXAS CRUDES

It will be appreciated if you will furnish information showing the quantity of sulphur contained in the oil being produced in West Texas, that is Pecos, Upton, Crane and Winkler Counties.—J.T.B.

The gravity of several samples of oil from West Texas has varied between 29 and 32 A.P.I. The gasoline content between 24 and 30 per cent.

The quantity of the total sulphur was 0.8 per cent in one sample from Crane County; a sample from Winkler County contained 0.87 per cent; one from Upton contained 1.86 per cent; three samples from Pecos varied from 1.17 per cent to 1.56 and another sample from Pecos was reported to contain 2.40 per cent sulphur.

AMMONIA FOR TREATING CRUDE OIL

Could you furnish us with any information regarding the use of ammonia for treating? We would like to know in what manner this material is used and also the grade of ammonia required for this purpose?—I. E. S.

The use of ammonia as a treating agent is largely confined to the stills for the purpose of preventing the formation of acids which have a corrosive action on the metal of the stills, towers and especially the condensers. Some ammonia is used for the purification of certain oils but the quantity consumed in direct treating is comparatively small. It is thought that your inquiry has to do with its use in stills.

There are two kinds of ammonia being used for this purpose known as anhydrous ammonia, which means ammonia gas or free from water; and the aqua or water ammonia, which is a solution of the gas in water. Ammonia is very soluble in water, one volume of water under normal conditions of temperature and pressure dissolving over 1,200 volumes of the gas. When dissolving such large volumes of ammonia the solution expands to a considerable degree and the specific gravity drops to less than that of water. The greatest concentration of a commercial solution is about 35 per cent or 29 degrees Baume, which is equivalent to 0.88 specific gravity. The aqua ammonia is frequently handled in drums containing about 100 gallons. The anhydrous ammonia is shipped in cylinders weighing about 250 pounds with the ammonia under a pressure of 200 to 300 pounds, depending upon the temperature. Usually the anhydrous ammonia is considered to be the most convenient form.

There are numerous ways in which ammonia may be introduced into the oil or vapors. It may be put in the oil through the charging pump or at some other convenient point along the line. Some run it into the still through an independent line. Again it may be introduced into the vapor line between the towers and the stills.

REMOVAL OF GASOLINE FROM GAS AND HEATING VALUE

Does the extraction of gasoline from gas lower the heating value of the gas to any extent? Any reference to reliable information about how this is determined will be appreciated.—M. C. K.

The heating value of ordinary natural gas is approximately 1,000 to 1,100 B.t.u. per cubic foot, and gas of this character may contain from 0.2 to 0.5 gallons of gasoline per 1,000 cubic feet. The extraction of the gasoline from this kind of gas may cause a loss of between 10 and 50 B.t.u. The rich gases having a high heating value, say 1,800 to 2,400 B.t.u., frequently contain from 3 to over 4 gallons of gasoline per 1,000 cubic feet, so when this quantity of rich hydrocarbons is withdrawn from the gas there may be an appreciable drop in the fuel or heating value. However, when reduced to a percentage basis this lowering of heating value will seldom be found to be over 10 to 12 per cent.

The most reliable way to determine the difference in the heating values before and after the gasoline has been extracted, is by actual determination of the heating value with a calorimeter. If analyses of the two gases are available, it is possible to calculate the heating values.

There is a formula which may be used for this purpose. This was developed by D. B. Dow in Technical Paper 253 of the Bureau of Mines, page 11, from which the following is abstracted.

It is assumed that one gallon of the average gasoline of 80 gravity will, if converted into vapor make a volume of 30 cubic feet. Gasoline of this gravity has a heating value of 21,500 B.t.u. per pound or 119,400 B.t.u. per gallon. The percentage loss in heating value because of the extraction of gasoline, is the equal

$$\text{to } B - \left\{ \frac{B - (A \times 119{,}400)}{1 - (a \times 30)} \right\} \div B$$

A—Gasoline extracted per cubic foot.
B—B.t.u. value before extraction.
30—Gallon vapor volume.
119,400—Gallon B.t.u. value.

This formula is developed as follows—A times 30 represents the quantity of gas equivalent to that of the gasoline removed; subtracting this from 1 gives the quantity left after gasoline removal from 1 cubic foot. A times 119,400 represents the heating value of this quantity, and the difference between this product and B represents the heating value of the residue; hence this latter figure divided by the actual quantity of the gas present gives the heating value per cubic foot. Then by subtracting this figure from B, the original heating value of the gas, the loss is obtained, and this in turn divided by B gives the percentage loss.

TREATING SULPHUR CRUDES

Can you say at this time that the problem of treating the crude oil, from Panhandle and South Texas, containing large percentages of salt, sulphur and compounds of sulphur, has been solved. If so, whether by the addition of chemicals or by change in process or equipment?—M. H. G.

There has been very little information published about the refining methods applied to the purification of the products obtained from Panhandle and South Texas oils. Many plants have arranged for the introduction of ammonia or aqua ammonia for the purpose of neutralizing acid and controlling the hydrogen sulphide. It has also been reported that when these crudes are run dry, that is without steam, that the corrosion trouble is less than when water is present. Ammonia, being a gas, is especially suitable for use in the still, vapor lines, towers, etc.

Ordinary equipment should not be used when refining crude oils which contain salt and large quantities of sulphur. There should be no contact with copper, or alloys, such as brass, containing copper. This fact must be considered when selecting exchangers for such service. The tendency for crudes containing salt to deposit this material in the tubes suggests that it is wise to use larger tubes in the exchangers than those commonly used to obtain maximum heat interchange.

The market price of petroleum products and the cost of crude oil are the deciding factors which control the matter of treating these crudes. Many years ago Frasch perfected the copper oxide process for the treatment of the high sulphur crude found in Ohio. A sweetening mixture containing copper oxide 75 per cent, iron oxide 15 per cent and litharge 10 per cent was also used with this oil. Such mixtures, and in some cases the copper oxide alone. were used in both the liquid and vapor phase. In one there was direct heating of the oil while in contact with the treating substance and in the other the distillate was sweetened by passing the vapors through the desulphuring mass. The recovering of these treating substances is usually the item of economic importance.

The total sulphur in the early Ohio oils was about 1.2 per cent and the untreated distillate contained 0.75 per cent; this was reduced to 0.08 per cent by the Frasch method. There were numerous patents covering this process but they have long ago expired.

UNSATURATED HYDROCARBONS AND ANTIKNOCK VALUE

It has been stated that the constituents once deemed objectionable in cracked gasoline are now recognized as giving it antiknock characteristics. (The constituents, of course, being the unsaturated hydrocarbons.) Why will unsaturated hydrocarbons in the cracked gasoline cause a more even flow of combustion than saturated hydrocarbons? As I understand it, the uneven chain of combustion causes the knock. Does the unsaturated hydrocarbons retard the premature combustion and cause the more even flow or what causes it?—G. B. K.

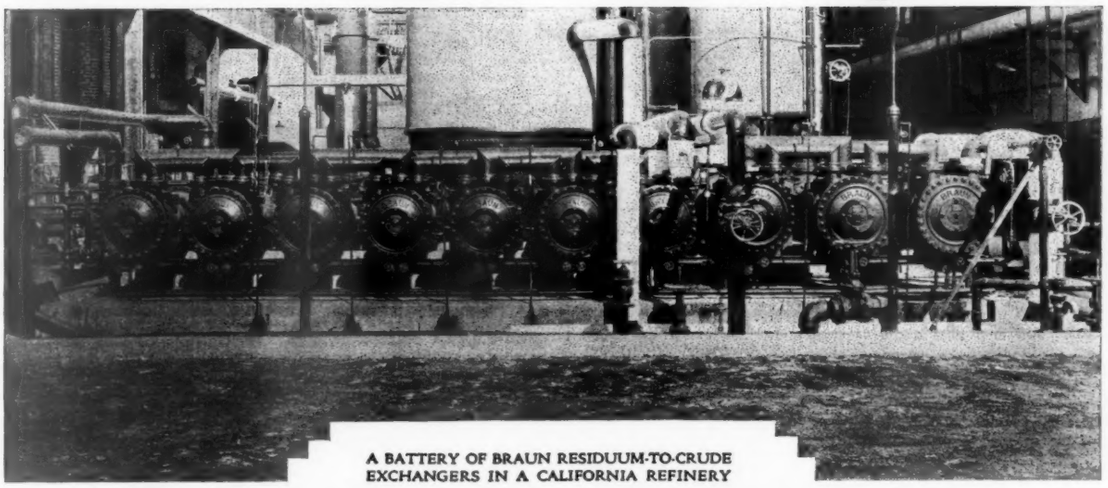
There are other substances in many cracked gasolines besides unsaturated hydrocarbons which have antiknock value. These include the aromatic hydrocarbons and the naphthene hydrocarbons. It is true that the unsaturated hydrocarbons are considered to be products of the cracking conditions, and that the aromatics and naphthenes are actually present in the distillates from certain crude oils. The quantity of these may be appreciably increased when gas oil and other primary products of the crude are converted to gasoline by means of high temperatures and pressures. This explains why the cracked gasoline from some crude is a better antiknock product than that obtained by topping the crude under normal conditions.

You are correct in the statement that the unsaturated hydrocarbons burn evenly. That is the combustion proceeds slowly and this, of course, gives a quiet burning with no knocking. The reason for this behavior is thought to be due to the peculiar composition of this class of compounds. The unsaturated hydrocarbons are usually straight chain hydrocarbons or compounds differing from a corresponding compound of the paraffin series by having two atoms of hydrogen less in the molecule. We know that a difference of two atoms of hydrogen has a marked influence on the properties of two substances, and without doubt a similar action toward combustion conditions would be expected when a saturated hydrocarbon is burnt in a motor as compared with an unsaturated compound under the same conditions.

The aromatic and naphthene hydrocarbons are also slow burners. Their molecular structure is quite different, both being what are known to the chemist as special ring compounds and not tending to form long chains as do the paraffins.

Several investigators have shown that the detonating fuels, such as the pure hydrocarbons of the paraffin series, produce large quantities of aldehydes and the fuels having high antiknock value yield very little aldehyde. In a review of this subject H. L. Callender, British Aeronautical Research Committee Reports, develops the nuclear theory to explain the action of compounds which prevent or decrease detonation. The residual drops, consisting chiefly of the higher parraffins, would tend to persist in the charge during compression and in the portion of the charge which remained unburnt after ignition. These nuclear drops, on account of their low ignition temperature, would act as foci of simultaneous inflammation, giving rise to detonation, although they formed a very small percentage of the mixture. The effectiveness of metallic dopes, such as lead tetraethyl and iron and nickel carbonyls, was explained by the fact that they naturally become concentrated in the nuclear drops, where they decompose, depositing metal which tends to delay the explosion of the drops. These substances do not destroy the aldehydes but appear to act so as to prevent their formation.

BRAUN
Heat Exchangers



A BATTERY OF BRAUN RESIDUUM-TO-CRUDE EXCHANGERS IN A CALIFORNIA REFINERY

THE DEVELOPMENT of BRAUN Heat Exchangers, including oil to oil exchangers, gas coolers, jacket water coolers, oil heaters, condensers and other forms of heat exchange apparatus, has followed certain definite lines, viz: 1, Greater efficiency of heat transfer surfaces; 2, Efficiency of turbulence and velocity of flow; 3, Compactness and reduction of space required; 4, Lower cost of operation and upkeep. This standardized equipment is rapidly superseding the older, bulky and inefficient devices, and in many instances has pointed the way to new processes and short-cuts for the conservation of heat.

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Of Interest to Sales Departments

Arkansas Refiners Promoting Sale of Antiknock Fuels

SHREVEPORT, La., Nov. 12.—In the development of gasolines adaptable for fuel in higher compression motors, which from present indications seem destined to come into popular favor, refiners of the North Louisiana and Arkansas district claim an advantage due to their use of Smackover crude. This oil is one of the few in the country which yields a naturally antiknock gasoline, a necessity in the new high compression motors. Other examples in particular are petroleums from California and some Gulf Coast fields. Smackover heavy is an asphaltic base crude and tests made by local refiners show it to have around at 40 per cent benzol equivalent, an unusually high percentage.

All refiners having offices at Shreveport, except one, now market special antiknock gasolines in addition to their regular motor fuel grade. Virtually all the business of one of these refiners is in this premium product and almost the entire output of his plant always is contracted ahead.

This product consists mostly of cracked gasoline from Smackover crude with some blend of gasoline from the skimming plant. This is a straight refinery product although the same refiner also has a contract to market ethyl gasoline through his jobbing trade. At present an effort is being made to change over some of the trade in the refinery antiknock gasoline to the ethyl product.

Two other refiners here are marketing ethyl gasoline. One of the latter also has an antiknock refinery premium gasoline. In addition to these, the Standard Oil Co. of Louisiana is marketing a premium antiknock product known as Esso. It has not been made known definitely what the latter is.

Sale of Ethyl

The Shreveport Producing & Refining Corp. is the latest of the Shreveport refiners to start marketing ethyl gasoline. The Louisiana Oil Refining Corp. and the Root Refineries, Inc., have blended it for several months. Sales of ethyl gasoline have shown a steady gain, one refiner stating that ethyl sales represent around 17 per cent of his total volume of business, and as soon as the Standard Oil Co. of Indiana territory is opened, a greater substantial gain may be expected.

In the use of ethyl, refiners here again are favored by their Smackover gasoline, rich in unsaturates and high in percentage of benzol equivalent. This has meant important savings to them in blending costs. Whereas refiners operating on most other crudes, particularly paraffin base oils, find it necessary to use the maximum allowance of 3 cubic centimeters of ethyl compound for each gallon of gasoline, refiners here need use only 1 cubic centimeter for the same effect, and most of the time less than that. Thus while most blenders find their ethyl costs ranging from 1 to 2 cents and possibly more a gallon, refiners here with their already antiknock Smackover gasoline produce the same equivalent for a fraction of a cent.

Straightrun Gasoline

Some tests have been conducted in refinery operations here to determine methods for retaining as high a percentage of unsaturates as possible. One refiner now in running a straight Smackover crude having 40 per cent benzol equivalent by topping the gasoline and kerosene ends, charges the gas oil to the cracking plant and gets a gasoline having a 55 per cent benzol equivalent.

The 55 per cent benzol equivalent cracked gasoline with a slight ethyl mixture is especially adaptable to high compression motors. At this refinery topped and cracked gasolines are kept entirely separate. The former is being sold as a straightrun motor fuel but it also has a benzol equivalent of between 35 and 40 per cent.

These results in this district are obtainable only by straight Smackover heavy crude. Other crudes, such as El Dorado, Bull Bayou and Pine Island, are sometimes blended with the Smackover oil, and naturally lower the antiknock value of the gasoline refined here. However, as previously mentioned, the bulk of the charging stock is Smackover crude.

Treating Difficulty

The principal difficulty refiners here have to overcome is in treating and rerunning, which, as known, reduces the percentage of unsaturates in the gasolines. Efforts are being made to eliminate as much treating and rerunning as possible, this offering one field of development in antiknock gasolines.

Although cracked gasolines usually have been considered as having greater antiknock properties than straightrun gasolines from the same crude, some question has arisen concerning relative values of skimmed and cracked Smackover gasoline. Recent tests indicated that skimmed gasoline from Smackover crude has a better antiknock value than the Smackover cracked gasoline.

The results of this test were admitted by engineers of one well-known cracking plant, who expressed the opinion that this relationship of gasolines from Smackover crude was an exception. North Louisiana and Arkansas refiners are inclined to doubt the accuracy of the equipment used in making the tests, believing an error to have been made in some manner.

OPENS FIRST STATION

The Wilcox Oil & Gas Co. has joined the long list of major oil companies operating one or more drive-in filling stations in Tulsa. The Wilcox company has just completed a large station adjoining the main business section of the city. In addition to the usual filling station service the company has made provision for parking several cars. The parking space is covered.

The Wilcox company is primarily a producing company with headquarters in Tulsa and previously had not operated a filling station. The company owns a small skimming plant at Bristow, Okla., which at present is under lease to the Riley Petroleum Co.

PERU REJECTS MONOPOLY

The Peru Chamber of Deputies has refused to ratify a referendum allowing all gasoline to be sold through a monopoly as proposed by a British subject, in which the state was to receive 12½ per cent of the total proceeds from sales. Instead, the adoption of a 4-cent tax appears probable and this money will be used on the roads. The total consumption of gasoline in the country amounts to only 1,200 tank cars yearly or about $400,000 in value, based on the present rate of exchange.

SIX MONTHS GASOLINE TAX

WASHINGTON, D. C., Nov. 12.—Gasoline tax returns over the first six months of this year as computed by the Government amounts to $101,250,841 and this amount is 19.2 per cent more than the corresponding period last year. Gasoline consumption for the same period amounted to 11.4 per cent more than last year, the difference in the percentage of consumption and revenue being due to the higher taxes adopted by the several states in the meantime.

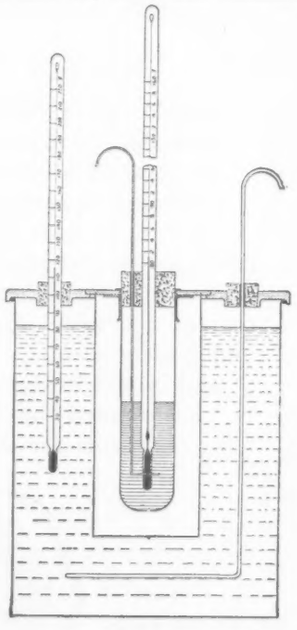
Short Talks on Specifications

By W. T. Ziegenhain

A. S. T. M. MELTING POINT FOR WAX

The melting point of paraffin wax is intended to show the temperature at which the wax crystallizes and sodifies but since the wax is made up of several hydrocarbons, each of which has a slightly different melting point, the test results must either show the melting point of the hydrocarbons crystallizing out first of the average. There are two methods in common use, the American Society for Testing Materials method, designated as the A. S. T. M. method and the American method. The A. S. T. M. method gives results which are consistently lower than the American method since the A. S. T. M. result shows what is more comparable to the average melting point while the American method shows the temperature at which the first crystal forms.

The results may be compared however as the melting point determination on the same wax, run by the two methods, will practically always vary by 3 degrees and it is common practice take the melting point by the A. S. T. M. method and then add 3 degrees when the American melting point is quoted. The explanation of the test procedure of each method will show why these result consistently



vary and the following is a brief summary of the best procedure when taking the A. S. T. M. melting point.

The apparatus used consists of a standardized glass test tube, air bath, water bath thermometers and stirrers as shown in the accompanying sketch. The sample of wax to be tested is melted in a separate container by means of a water bath, the temperature of which should not be more than 35 degrees Fahrenheit above the approximated melting point of the sample. The test tube is filled with the melted wax to a height of 2 inches. The test tube should be stoppered, holding the stirrer and thermometer in the position shown. The air bath which immediately surrounds the test tube and supports the test tube assembly by a cork is suspended in the water bath which is kept at 15 to 20 degrees Fahrenheit below the expected melting point of the wax, when the test is started.

Then as the wax slowly cools and the water slowly heats the temperature readings of the water and wax are observed and when the temperature of the wax cools to 10 degrees above its expected melting point the water should be 25 to 30 degrees lower than the wax temperature. If the water temperature is not within this range, it should be obtained by stirring. After these requirements are met, stirring of the water is discontinued and instead the wax is slowly stirred during the balance of the test.

The wax temperature should be taken every half minute and the temperatures recorded. During the cooling of the wax, the temperatures will gradually decrease and then for a few half minutes, the readings will be practically the same. Then the readings again start to go down at about the same rate as before and this point where the reading appear to be constant, marks the time the wax is changing from the liquid form to a solid and the break in the temperature decline is due to the wax giving off heat during its crystallization.

The average of the first four temperature readings during this period which lie within a range of .2 degrees is the A. S. T. M. melting point of the wax.

The description of the apparatus and procedure used in determining the American melting point will be included in the next issue of The Oil and Gas Journal.

SOVIET OIL EXPORTS BREAK ALL RECORDS

WASHINGTON, D. C., Nov. 12.—Soviet Russian oil exports for the fiscal year ending September 30, amounted to 2,038,000 metric tons, breaking all Russian records, according to a bulletin issued by the Soviet Union Information Bureau. The previous high mark was 1,837,000 metric tons, in 1904, before the decline in production under the old regime. Exports for the year were 123.4 per cent higher than those in 1913, and 38.4 per cent higher than in 1925-26.

The detail figures show a complete change in the character of the exports since 1913. Gasoline and fuel oil formed 68 per cent of the total export during the year, kerosene only 21.5 per cent. In 1913 gasoline and fuel oil accounted for only 6 per cent and kerosene 69.5 per cent.

The principal consumers of Soviet oil products during the past year were Italy, 447,600 metric tons; France, 386,000; Great Britain, 381,000; central Europe and Germany, 346,000. During the year exports to France increased 115 per cent, to Egypt and India 85 per cent, to the Baltic States and Finland 56 per cent, to Germany and central Europe 44 per cent, to Italy 25.5 per cent.

STELLARENE IN CANADA

CHATHAM, Ontario, Nov. 12.—The Maple Leaf Refining Co. has started the distribution of "Stellarene," a special antiknock gasoline at Canadian points. The gasoline is a product of the Leamon vapor phase cracking process which recently started operating at the Maple Leaf plant. The cracking process is owned by the Beaver Refining Co.

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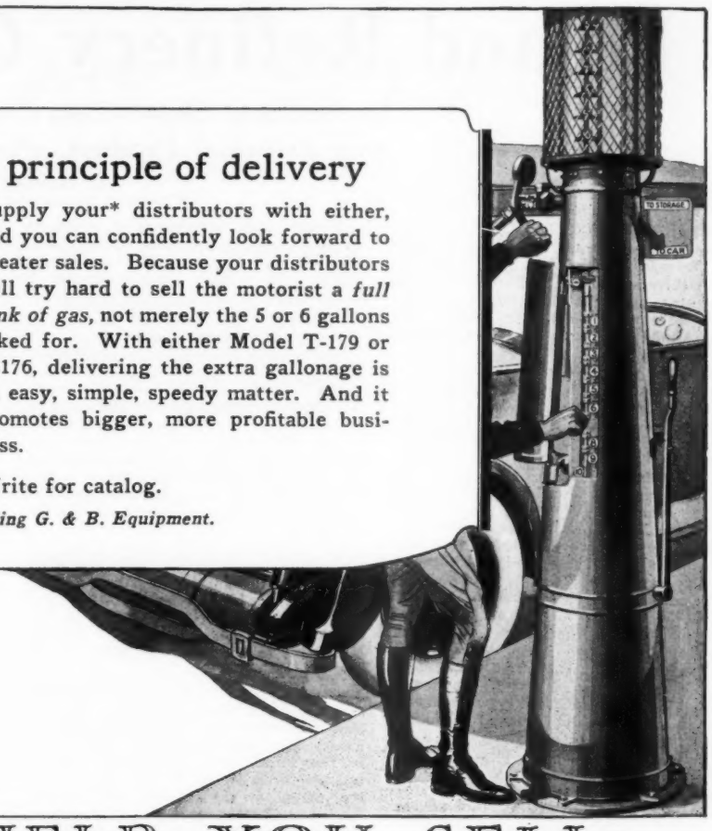

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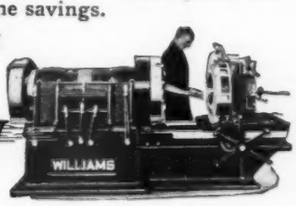

Poland Refinery Output Decreases

Government Shows Less Crude Being Refined. Kerosene Principal Product. Plants Located Near Fields

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 12.—The petroleum industry in Poland shows a decrease of refining output during the first three months of 1927 compared with the same period of the previous year, according to statistical data compiled by the Ministry of Industry and Commerce of Poland.

During the three months from January to March, inclusive, the quantity of crude oil refined was 173,071 tons, compared with 189,724 tons in the same period of 1926; 194,465 tons in 1925 and 158,346 tons in 1924.

These figures include the output of the state refinery, in addition to that of private companies. During March the quantity of oil refined was 54,936 tons, which shows an increase of 595 tons over the quantity of oil refined in February.

The employment figures indicate that economies have been achieved, because, while in March there was an increase of output over February, the number of workmen employed in March was 5,321, a decrease of 146, compared with February. The number of active refineries in March was 29, which was a decrease of one refinery since February. Kerosene was the largest product obtained, being about equal in quantity to the benzine and gas oil produced.

During the first three months of this year, of the 173,071 tons of crude oil run to refineries, the total output of oil products was 155,750 tons, and of that total 52,458 tons consisted of kerosene, benzine being 20,641 tons and gas oil 31,788 tons. The paraffin produced was 10,115 tons, lubricating oils, 26,999 tons.

Market Outlets

Of the 155,750 tons produced in these three months, 81,704 tons were consumed in the domestic trade and 82,699 tons were exported. Czechoslovakia received 28,838 tons of this export oil, Danzig, 15,406 tons; Austria, 11,549 tons; Switzerland, 8,331 tons; Germany, 8,574 tons; Hungary, 2,162 tons, and France, 1,708 tons. In 1925, Germany was the largest consumer of these export oils, having received 33,340 tons, but that trade dropped off in the first three months of 1926 to 2,192 tons, from which it is showing a slight recovery. All of the oil development of Poland is along the Czechoslovakian boundary line, which probably accounts for the ascendancy of that country in the receipt of this Polish oil.

A recent compilation by Stanislaw Unger and Stanislaw Zarecki, of the Union of Mineral Oil Producers and Refiners in Poland, gives general information concerning this industry. It is pointed out that the Austrian Empire, which had a part in the division of the old Polish State, would not follow the example of other countries in systematically investigating the oil fields, so that only in the past few years has the Polish Government been able to organize a state geological survey, to undertake the survey of these oil fields.

These fields are located in the Province of Galicia, where, it is stated, the exploitation of crude oil was commenced with the establishment of refineries in 1853-1857, or at about the same time oil development was initiated in the United States. The total output of crude oil produced up to the present in Galicia amounts to approximately 200,000,000 bbls., which is about three months production at the present time in the United States. The largest yearly production was in 1909, when it reached 15,000,000 bbls. While these figures do not seem large, compared with American production, they are important because of the unknown possibilities of the Galician Field in the future, especially in view of contemplated deeper drilling.

In 1924, the exploitation of crude oil in Poland was carried on in 97 localities, of which 50 were situated in western Galicia. Everything the government of Poland can do to encourage production and refining of oil is carried out.

Shallow Wells

The wells of Poland are not deep when compared with those of the United States. In the western group the depth is only from 1,000 to 2,000 feet and the wells produce only from a few to a dozen barrels of oil daily, but have long life and in some cases have continued producing for 20 years and are still going. The oil has only a small amount of gasoline and is used chiefly for the production of lubricants.

In other parts of this same group the wells run from 2,300 to 3,000 feet deep and have been almost exhausted, but new horizons have been struck at a depth of 5,000 feet. The present outlook is for deeper drilling, enough of which has not been done to determine the probable result of such drilling.

These Polish oil fields are easily accessible, being close to railway lines, so that transportation difficulties are not great. Machinery, pipes and cables used in the Polish oil industry are mostly manufactured by the Polish metal industry, which, at the time of the Russian domination, took care of an important part in the Baku oil wells requirements. There are also a number of works manufacturing special drilling machinery, which before the war and at the present time are exported to other oil producing countries.

Drilling Methods

Until the past several years the oil wells of Poland were drilled exclusively on what is known as the Galician-Canadian system. However, on account of the very slow progress in drilling by this system, successful experiments have been made with rotary, cable and other drilling methods, which the oil companies of Poland find necessary to be especially adapted to the peculiarities of the Polish geological strata. The electrification of wells has been introduced in several localities and in the Boryslaw district storage tanks have been constructed to the extent of about 15,000,000 bbls. capacity.

The technical personnel of Poland engaged in the oil industry is said to be so efficient that many of their engineers and drillers obtain employment in America and Asia.

The legal title to oil deposits under the ground, under the mining laws of Poland, is in the owner of the real estate on which they are located. He is entitled to transfer this oil mining right by lease or otherwise.

This legal title is viewed as giving the fullest possible factor of safety to oil producers. As a rule, the owner of the land assigns the oil mining right for a period of 25 years, with a stipulation that the purchaser shall proceed to drill and operate the property. He also generally exacts a small rent for the entire area leased and he receives royalties of from 6 to 20 per cent of the production.

Refinery Location

Nearly all of the oil refineries are situated in close proximity to the oil fields, alongside the Carpathian Hills. The largest refinery is the state refinery, erected by the Austrian Government for gasoline extraction purposes and in 1919 to 1924 was extended and enlarged by the Polish Government to a complete refinery. After the war all of the larger refineries were completely reconstructed and the prewar capacity practically doubled. As a rule, the refining companies conduct their own drilling operations so that production and refining are generally under a unified management.

At present, the large and medium refineries have agreed, under the sanction of the government, to divide the entire available market in proportion to the quantity of crude oil produced by them monthly. This was done to stop what was regarded as uneconomical and extravagant marketing cost.

Consumption Small

The consumption of petroleum products in Poland is still very small. In the case of kerosene it is 1.24 gallons per capita, 0.275 gallons gasoline, 0.325 gallons gas oil and 0.5 gallons lubricants per capita. The prewar consumption was very much larger than it has since been under Polish independence. At that time kerosene alone represented a consumption of 2.2 gallons per capita. However, since the low level of consumption immediately following the World War there has been steady progress.

Many of the refining companies have their branch offices in Austria, Germany, France, Danzig and elsewhere. These offices take care of their sales in bulk. To avoid wasteful competition, the Polish refineries have an understanding respecting their export prices, which was begun in December, 1924. Since then these export prices are periodically fixed at special conferences. This price agreement has resulted in closer co-operation on all export trade, so that it is believed many economies have been introduced to the advantage of the industry.

Commercial treaties between Poland, Czechoslovakia and Hungary includes special stipulations respecting petroleum productions to these countries involving reductions for transit transport. The treaty with France also includes special advantageous privileges for petroleum products of Polish origin.

The oil industry of Poland was founded and developed in the first years of its existence almost exclusively by Polish engineers and Polish capital. The Canadian drilling system was introduced and the Canadians carried on some drilling operations there from 1884 to 1893 and that early association of interest has prevailed to a large extent down to the present time. Foreign capital has been depended upon to a large extent to provide machinery and equipment necessary.

American Capital

After the war, American capital, for the first time, became really interested in the Polish oil fields, with the result that up to a comparatively recent time about 50 wells had been drilled by American companies, which also had established two refineries, one belonging to the Standard Oil Co. and the other to the Vacuum Oil Co., which have since been enlarged on a great scale.

There are but few of the larger drilling companies that are Polish because of the scarcity of capital resulting from the war. However, Polish capital is being brought more and more into the petroleum industry. With the arrival of the Standard Oil Co. and the Vacuum Oil Co., American drilling methods have prevailed generally to a larger extent than was previously the case.

Government Control

The State Oil Council of Poland has taken a paternal interest in the Polish oil industry and has not hesitated to prohibit the exportation of crude oil when the operation of the refineries was below normal. The policy of the state council is to require all the crude oil up to the normal capacity of the refineries to be treated in Poland. This council is composed of representatives of the different groups of the oil industry and in no sense is regarded as hostile to the industry. On the other hand, it is distinctly favorable toward keeping the industry on a profitable basis.

Since the prohibition against the exportation of crude oil, new wells located about 2 miles from a producing well have been given the right to export 30 per cent of their crude oil output. This is for the purpose of encouraging the capital of countries previously belonging to the Austrian Empire, which have refineries and sufficient crude oil production, to make investments in the Polish oil fields. This provision operates in the manner indicated on Czechoslovakia, Austria, Hungary, etc.

The Polish Government has, since its establishment, co-operated in every way possible to promote the development of the oil industry and for that purpose the special oil department was formed and an oil council created. Railway tariffs give a preferential rate of 50 per cent, in comparison with the normal tariffs on inland transportation and shipments. Shipments of oil to Danzig have a preferential rate of 6 per cent. These preferences are for all refineries, regardless of their distance from the northern and western frontiers.

Contrary to the policy pursued by some other countries possessing oil fields, the Polish Government does not limit or hinder the investments of foreign capital in the oil industry. On the other hand, important privileges are granted to foreign investors, as the Government sees the importance of such capital if its oil is to receive active exploitation. There are no requirements that a certain number of members of the management of foreign companies should be Polish citizens. Foreign capital, introduced in the form of loans, is exempt from the revenue tax.

The Polish Government willingly leases its oil fields to foreign companies on the same conditions as to Polish companies and these foreign companies benefit from facilities granted to Polish companies by the Government.

DEATHS IN CANADIAN FIELD

CHATHAM, Ontario, Nov. 12.—William Garrett, for 50 years a resident of Petrolia, Ontario, died recently in his eighty-fourth year. Coming to Petrolia in 1869, he spent practically all his active life in the oil business, being for 20 years with the Western Oil Co.

Bloss Parsons Corey died at Petrolia, Ontario, recently of heart failure, in his fifty-sixth year. He grew up with the oil business, as a young man entering the partnership of Harrison, Corey & Son, one of the first firms to manufacture nitroglycerin for shooting oil wells; but later branched into oil production, having, in addition to its Canadian interests, extensive interests in Pennsylvania and other states. About seven years ago he formed the company of Bloss P. Corey & Son, carrying on a wholesale business in gasoline and oils. He was a partner of the Elmer E. Harris & Co., refineries at Buffalo, N. Y., and was for 34 years connected with the Galena-Signal Oil Co.

John Henry Fairbank, aged 27, son of the late Dr. C. O. Fairbank, of Petrolia, Ontario, died November 1. He was a grandson of the late J. H. Fairbank, founder of the Fairbank oil interests of Petrolia, Ontario.

SPANISH OIL MONOPOLY

The king of Spain has signed the concession of petroleum monopoly and it will take effect, it is reported, on January 1 next. The control of gasoline sales in the meantime will be in the hands of the director-general of taxes.

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WORK'S DECISION FAR REACHING ON WESTERN OIL SHALE TITLES

By Tolbert R. Ingram

DENVER, Colo., Nov. 12.—A decision which is considered one of the most important and far reaching of any affecting titles to western oil shale lands, has been rendered recently by Hubert Work, Secretary of the Interior, in the combined cases of J. D. Freeman and the Standard Shale Products Co. versus George L. Summers, in which the United States was an intervenor. The effect of the decision is to clear up misunderstandings of several years' duration as to what constitutes a valid mineral discovery on oil shale claims filed upon under the old placer mining laws in effect before the adoption of the general mineral and oil leasing act of February 25, 1920.

Large areas of oil shale lands in the western states had been filed upon under the old laws, and numerous applications for patents had been made to the district land offices. Many of these had been held up because of conflicting opinions as to what constituted a valid discovery, and as a result a muddled condition existed. The uncertainty of the situation undoubtedly has had a retarding effect on the development of oil shale holdings and has hindered the closing of numerous land deals. It is believed that the decision in the Freeman-Summers case has settled the involved question.

North of DeBeque

The lands involved in the decision are located 18 miles north of DeBeque, in western Colorado. Summers made application on May 10, 1920, for an enlarged homestead entry on some of the land, and on the same day also filed an application for addition stock raising entry. The first application was allowed by the District Land Office at Glenwood Springs, with mineral reservations to the Government, on May 17, 1920, and the second on January 28, 1921. A protest against the enlarged homestead entry was filed by the Standard Shale Products Co., alleging a superior right to the tracts by virtue of ownership and possession of two placer mining claims initiated by location on April 5, 1918. A like protest was filed against the entiry of the remaining lands by Freeman based on alleged ownership of placing mining claims filed on April 1, 1918.

By decisions of December 20, 1924, these protests were dismissed and the mining claims held to be null upon the grounds that on February 25, 1920, the date of the approval of the leasing law, no discovery of a valuable deposit of oil shale had been made upon any of these claims as alleged, nor was there at that date diligent prosecution of work leading to discovery. These decisions were affirmed on motion for rehearing and retrial May 23, 1925.

The contestants thereafter filed a petition for the exercise of supervisory authority.

By decisions of July 29, 1925, the department favorably entertained the petitions and authorized further hearing at the local land office between the parties, the Government, represented by inspectors, being allowed to intervene. The record made at said hearing with briefs and arguments of the parties, has been given extended consideration.

Conference Held

The muddled condition as to what constituted a valid discovery finally resulted in Secretary Work calling a conference to be held in Washington, D. C., on December 1, 1926, to discuss the entire situation. Western oil shale men, their attorneys and technical experts were invited to attend. The Government, in the meantime had conducted an extensive investigation on its own responsibility. The conference was open and all restrictions were removed so that all phases of the questions involved could be discussed. One of the things most pleasing to the oil shale men was the evident desire of the Secretary to go into the matter most thoroughly and reach a decision that would establish a precedent on all similar controversies. The facts as disclosed at this hearing and by the Government's investigators, formed the basis for the decision in the Freeman-Summers case, which is as follows:

The contestants advance the proposition that the Green River formation, at least an area thereof bounded by Green River on the east, the Colorado River on the south, Brush Creek on the west, and Piceance Creek or White River Divide on the north, and within which boundaries these claims are located, is one massive homogeneous deposit of like mineral, easily identifiable by fossil insects; that it is one stratum, one bed, from its base to its topmost reaches, a vertical distance of from 2,700 to 2,800 feet; that all sections of a stratigraphic column of this formation contain either shale, sandy shale, shale sand, or sand that will yield oil upon destructive distillation; that in the light of latest information and engineering research and opinions, the feasible method of mining will involve and dictate the mining of all the shale from the base of a rich bed, known as Mahogany bed, to the exposures of shale upon the land; that the various deposits of sandstone upon the land in question are but thin partings, which have some oil content; that the whole body, therefore, will be commercially developed and is all valuable, and discovery of any oil shale upon the land, being a part of the integral mass that lies below it, is a sufficient discovery to satisfy the requirements of the law.

Classification of Shale Land

Before proceeding with further discussion of the matter, reference is made to certain regulations of the geological survey relating to the classification of oil-shale land quoted in previous decisions of this department, to the effect that where shale beds are too deep to be mined by open cut methods, such lands must contain shale capable of yielding 1,500 bbls. of oil per acre in beds not less than 1 foot thick, yielding 15 gallons per ton, and within a reasonable depth below the surface. Second, that where the shale beds are sufficiently near the surface to be mined by open cut methods, the lands must contain shale sufficient to yield 750 bbls. of oil per acre in beds not less than 6 inches thick, and yield not less than 15 gallons per ton.

The impression appears to have become general that these regulations were to be used as a yardstick, with which the department would determine in all cases whether sufficient discovery to warrant the issuance of patent therefor under the mining laws had been made. An endeavor to correct this impression was made in a subsequent communication relative to the rehearing in this case, and later by a letter signed by the Secretary of the Interior, explaining that such was not the purpose of the department, and that each case presented must be determined upon the facts there disclosed.

Section 2,320 of the United States Revised Statutes provides, that: No location of a mining claim shall be made until the discovery of a vein or lode within the limits of the claim located.

Section 2,329, with reference to placer claims, in which category oil shale beds fall, provides that placer claims shall be subject to entry and patent—under like circumstances and conditions or upon similar proceedings as are provided for vein or lode claims.

It is a statutory requirement, therefore, that no location of a placer mining claim shall be made until the discovery of mineral within the limits of the claim located.

General Rule

The general rule of the department as to what constitutes a sufficient discovery within the limits of a lode mining claim was laid down in the case of Castle vs. Womble (19 L. D., 455), and has since been followed.

It is my opinion that where minerals have been found and the evidence is of such character that a person of ordinary

prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine, the requirements of the statute have been met.

In Kern Oil Co. vs. Clotfeler (30 L. D., 583), the department held: The evidence bearing upon the mineral character of the land selected should not be restricted to mineral discoveries or developments upon these lands and to their geological formation, but may extend to the discovery and development of mineral on adjacent lands and to their geological formation.

See also, in this connection Jefferson-Montana Copper Mines Co. (41 L. D., 320).

In the Oregon Basin Oil & Gas Co. case (50 L. D., 244-258), the department denied an application for placer patent for lands alleged to contain valuable deposits of oil and gas, on the ground of failure to show sufficient discovery. Slight discoveries of gas or oil had been made in shallow wells in shale or sand near the surface, and it was contended that this warranted a prudent man in going further with a reasonable expectation of finding valuable oil deposits at depth. The department concluded in that case that the showing presented: Fails to satisfactorily establish that in either of the wells drilled on the claim there was encountered any formation carrying oil or other mineral in sufficient quantity to impress the land with any value on account thereof, while, on the other hand it is conclusively made to appear that the formations from which oil values are expected to be developed within the limits of the claim exist many hundred feet below, and are wholly unconnected with the formations penetrated in said wells.

What Law Requires

From the foregoing it follows that the law requires as a prerequisite to a valid location that mineral be discovered within the limits of the claim located; that the mineral indications shall be such as to warrant a prudent man in the further expenditure of time and money, with a reasonable prospect of success. In order to warrant that proceeding, he must have discovered mineral in such situation and such formation that he can follow the vein or the deposit to depth, with a reasonable assurance that paying minerals will be found. In other words, the discovery of an isolated bit of mineral, not connected with or leading to substantial prospective values, is not a sufficient discovery; but a mining locator is not expected to find at the surface or in a shallow working a body of mineral which can be immediately mined and reduced at a profit. It is sufficient, as already stated, if he finds mineral in a mass so located that he can follow the vein or the mineral-bearing body, with reasonable hope and assurance that he will ultimately develop a paying mine.

In this case it appears from the evidence submitted at the original hearing and rehearing that actual discoveries of mineral were made either on the surface or in shallow workings. The existence of oil shales in northwestern Colorado is a matter of common knowledge, and the deposits have been the subject of exploration and study for a number of years.

In 1923 the geological survey of this department published Bulletin No. 729, relative to the oil shales of the Rocky Mountain region. It was stated on page 21 of this bulletin: By far the most extensive and rich oil shales of the United States; and perhaps of the world belong to the Green River formation of Colorado, Utah and Wyoming.

On page 36 it is stated: The youngest sedimentary rock in the Piceance Basin belongs to the Green River formation, which also carries most of the oil shales, * * * The Green River formation is the surface rock over the entire interior part of the Piceance Creek Basin. * * * Interbedded with the rich oil shale are beds of lean and almost barren shale and sandstone of varying thickness.

Division in Three Members

On the same page it is stated: The presence or absence of rich oil-yielding shales permits a division of the Green River formation into three members * * * The upper member is composed largely of soft shales with some sandstone, and includes but few beds of rich oil-yielding shales. The middle member almost everywhere along its outcrop includes beds of rich oil shales which in some places have a great aggregate thickness, and which are everywhere extremely resistant and stand out in relief.

There have been filed with the department photographs and other exhibits, descriptive of this Green River formation, and which support the allegations of contestants as to its presence in the immediate area in which these particular claims are located.

The oil shale deposits of the United States have, as heretofore stated, been well known for a number of years, and have been the subject of much exploration, study, and investigation. They have been recognized by the department and by Congress as a very valuable natural mineral resource. They have been the subject of treatment in a large number of experimental reduction plants, one of which was provided for by Congress and is now in operation.

While at the present time there has been no considerable production of oil from shales, due to the fact that abundant quantities of oil have been produced more cheaply from wells, there is no possible doubt of its value and of the fact that it constitutes an enormously valuable resource for future use by the American people.

It is not necessary, in order to constitute a valid discovery under the general mining laws sufficient to support an application for patent, that the mineral in its present situation can be immediately disposed of at a profit. As stated by the department in the case of Narver vs. Eastman (34 L. D., 123): It does not follow that because there is no clear profit arising from the sale of an article that has been manufactured or produced, that it therefore has no commercial value. Take, for example, the farmer. In the course of husbandry it frequently happens that different crops raised by the farmer when put in market do not sell for enough to pay the costs of their production and transportation, but can it be truly said that said crops have no commercial value simply because after the same have been sold and all expenses incident to their production and shipment deducted, there is no clear gain to the farmer, and, therefore, as a corollary, that the lands are not valuable for agricultural purposes? And the same may be said as to the entry under this act of land valuable "chiefly for stone." Could not the land be valuable chiefly for stone even though, because of its remoteness from market or other causes, the stone could not then be sold for a remunerative price?

Conclusions

The evidence in this case shows that in this particular area of Colorado the lands contain the Green River formation, and that this formation carries oil shales in large valuable quantities; that while the beds vary in the richness of their content, the formation is one upon which the miner may rely as carrying oil shale which, yielding at places comparatively small quantities of oil, in other places yields larger and richer quantities of this valuable mineral.

In other words, having made his initial discovery at or near the surface, he may with assurance follow the formation through the lean to the richer beds.

There can be no question whatever as to the greater value of the lands for their oil shale deposits than for other purposes. Their agricultural value is negligible; their value for grazing purposes is nominal, and the real and principal value is the mineral deposit.

After careful consideration of the entire record, the department has reached the conclusion that the locations are valid, and if otherwise regular, are entitled to pass to patent under the general mining laws. Prior departmental decisions in this case are accordingly recalled and vacated, the decision of the commissioner of the General Land Office affirmed, and the homestead entries 018,825 and 018,827 of George L. Summers held for cancellation, because made upon lands covered by prior valid mineral locations.

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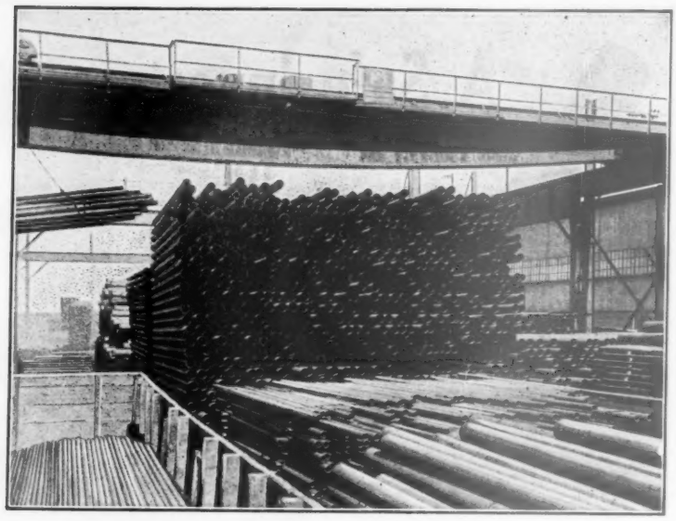

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ODEE PIPE FOR GAS LINES

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DIAMOND—"H"—
Bit and Jar Steel

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OIL DEVELOPMENT IN COLOMBIA IS AN EXPENSIVE PROPOSITION

Colombia, South, America, will assume its place among the important petroleum nations of the future, but the initial cost and hazards of prospecting are expensive, according to Hugh B. Hodges, former operating executive of the Colombian Oil Syndicate, who is in Tulsa after spending some 15 months in Colombia handling the properties of his concern.

The general conditions of the Colombian oil lands are improved, according to Mr. Hodges, and the finding of good producing properties by the concern having the largest interest, has resulted in the construction of splendid camps with many conveniences, and numerous health and recreation facilities.

Mr. Hodges has spent considerable time in the tropical oil fields since leaving California, and later the Mid-Continent. Discussing petroleum conditions in Colombia, he stated that at this time there are 23 drilling wells in the country, and although no detailed figures are available, Mr. Hodges believes that Colombia now has approximately 100 producing wells, with an estimated daily output of 55,000 bbls.

The main producing field is about 400 miles from the seaboard, and a complete pipe line system constructed and operated by the Andian National Corp. is handling the oil. One of the difficulties in operating the line is the problem of telephone and telegraph. Owing to the dense forest and jungle conditions, and to the rapid rate of growth which the tropical country experiences, to keep the line in operation is a real task, for the falling trees repeatedly break the wires, and place one station out of communication with the others.

Development Costly

Much study has been given to the advisability of supplying all stations on the line with radio broadcasting equipment, in order to overcome this trouble, and Mr. Hodges stated that engineers are now engaged in working out the radio matter with a view to installing the equipment as soon as practicable.

Owing to the tremendous prospecting and development costs, the land grants and leases are handled in extraordinarily large tracts, generally running into several hundred thousand acres. To conduct the necessary geological work, establish the required number of camps and hospital facilities, to construct the telegraph and telephone system after the drilling location had been made, to build the necessary roads, and keep them open, to install all character of transportation, water, truck and tractor, and to move the drilling rigs and equipment and drill one wildcat well in Columbia cost an operating company over half a million dollars, according to Mr. Hodges' estimates.

Both rotary and cable tools are used in this country, the greatest drilling obstacles being very cavey formations which are found close to the seacoast. The majority of wells in the interior are drilled with rotaries.

The most remarkable feature of Colombia, in Mr. Hodges opinion, is that with one exception not a single well ever drilled in the country has been totally dry, but all have had some showings of oil. A large percentage of them have not been commercial producers, but with the one exception they have all found some oil.

The producing sands in the country are found generally from 400 to 4,000 feet. There was a shallow showing of oil found at a depth of 36 feet in one well, and Mr. Hodges enumerated many instances of large seepages which were existant in Colombia. The bulk of Colombia's production comes from a sand found around 2,500 to 2,600 feet, and when a new well is started, the average depth planned is 4,000 feet, aside from the wells in the proven or semiproven region.

Two Structures

Speaking of the future possibilities, he said that it was generally believed that Colombia had two structures which are thought to be proven; and a region which he believes will encompass one of the best pools of the future for the land, is situated 390 miles north of the mouth of the Magdalena River, and 30 miles east of th river which runs almost directly north. He believes very strongly in the chances of this area.

Transportation now proves one of the greatest annoyances and expenses in Colombia. From Baranquilla, the port of entry, to the site of a well which his company drilled some 390 miles, cost $90 per ton to transport the derrick and drilling equipment. In traversing this distance, river boats, mules, canoes, and finally tractors, were necessary. Leaving Baranquilla, the river boats were employed as far as the stream was navigable. Leaving the boats, a short span of 15 miles was covered by moving the rig and equipment by mule power to the railroad. After the railroad had served its purpose, canoes were used, and when land was again touched, tractors hauled the material the final stage of the journey. The excessive cost was occasioned by a period of freight congestion at Baranquilla which had a tendency to slow up operations.

A refinery is located at Baranca, and part of the Colombian crude is refined at that spot. The oil has a gravity running from 32 to 36 degrees A.P.I. and is of asphaltic base. The pipe line sea terminal is located at Cartagena.

When the Colombia wells stop flowing, they may be pumped by ordinary methods, and the most popular manner of pumping is by steam, pumping them "on the beam." There is now under construction by an oil company a large power plant comparable with that necessary in a city of 100,000 population. When this plant is finished, it will supply the necessary current for the electrification of the Colombian oil fields, and Mr. Hodges stated that he believed it was the intention of the operating companies to use electricity exclusively for drilling and producing the oil.

The working conditions are typical of the tropics, and the drillers, tool dressers and derrick men are Americans, with common labor furnished by the natives. The drilling crews work eight hours per day under ordinary conditions, and a large percentage of them renew their contracts upon expiration.

Camp conditions are excellent as far as sanitation and amusement are concerned, and rigid medical attendance is one of the requisites of the oil companies in the land. Much of the food is imported from the United States, and native beef is used.

Malaria is the Americans' worst enemy, and for 150 employes he has to purchase five pounds of quinine every 90 days, Mr. Hodges remarked. The Colombian government is very particular about hospital reports and every oil company is required to make a complete hospital report each month, detailing the number of men treated and the nature of their illness.

NEW COLOMBIAN OIL BILL

Cable advices from Colombia state that Minister of Industries Montalvo appeared before the Senate November 3 and presented an emergency petroleum bill. An important feature of the proposed measure provides that authority be given the government to vary by decree the terms and conditions that govern the making of contracts for petroleum development, conveyances and permits for exploration.

MEXICO CONTINUES DECLINE

The consistent decrease in Mexican oil production has been accompanied by an intensified activity in drilling, in the effort to replace the failing wells with new flow, but the percentage of successes from new attempts has been much smaller than that recorded in previous years. Drilling has been commenced in the present year in new zones, with a few encouraging indications, but the general result is continued decline.

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE FIRST REPORTS

Gray County

Mid-West Exploration Co.'s No. 1 J. B. Bowers, 330 feet south and east of NW cor. of the west half of Section 63, Block B-2, H. & G. N. Survey. Purple Sage Oil Co.'s No. 2 E. B. Johnson, 2,400 feet south and 330 feet west of NE cor. of Section 1, G. C. & S. F. Skelly Oil Co.'s No. 2 W. Jackson, 330 feet south and west of the NE cor. of SE of Section 88, Block B-2, H. & G. N. The Texas Company's No. 3 J. B. Bowers, 330 feet north and west of SE cor. of Section 91, Block B-2, H. & G. N.

Hutchinson County

Phillips Petroleum Co.'s No. 1 J. M. Sanford-J, A. Chap, 990 feet south and 330 feet west of NE cor. of the east 80 acres of the south 160 acres of Section 78, Block 46, H. & T. C.

NORTH CENTRAL AND WEST TEXAS FIRST REPORTS

Archer County

The Texas Company's No. 5 A. & E. Jentsch, 1,359 feet south and 150 feet east of NW cor. of Section 115, Club Ranch Subdivision. Atlantic Oil Producing Co. and H. Hines' No. 1 A. P. Neal, midway east and west and 150 feet south of the north line of Section 5, Edward Wayeischouski Survey, A-675. L. T. Burns and others' No. 1 J. T. Richardson, 1,321 feet south and 966 feet west of the NE cor. of the W. C. McCume Survey, A-943. Consolidated Oil Co. & Underwood's No. 1 H. L. & J. F. Ward, 150 feet south and west of the NE cor. of the east 50 acres of the south 250 acres of Section 1,382, T. E. & L. Cook & Reeder's No. 1 J. M. Hayter, 870 feet north and 450 feet east of the SW cor. of Section 2,436, T. E. & L. Murchison Oil Co. and others' No. 1 S. M. Cowan estate, 150 feet north and west of the SE cor. of SW of SE of Section 18, Jefferson County School Land, A-240. Pandem Oil Corp.'s No. 1 W. H. Thomas-C, 150 feet north and 450 feet west of the SE cor. of Lot No. 4, North Subdivision, Nathan Thomas Survey, A-454.

Brewster County

Cady & Keller's No. 1 Decies, 2,740 feet south and east of the NW cor. of Section 7, Block 4, G. C. & S. F. Survey.

Brown County

Adamson & Bearman's No. 2 S. T. Miller, 550 feet south and 200 feet east of the NW cor. of the west 40 acres of the east 80 acres of the E. Brooks Survey, A-1,597. Amerada Petroleum Corp.'s No. 3 Jim Gilbreath, 150 feet north and 531 feet east of the SW cor. of its lease out of the R. F. DeBord Survey, A-2,136. Brooks Dozier's No. 1 D. Evans, 1,470 feet north and 450 feet west of the SE cor. of the D. Evans 140-acre tract out of the C. B. Banister Survey No. 626. J. K. Hughes Development Co.'s No. 3 Jim Gilbreath-A, 450 feet north and 150 feet west of the SE cor. of its 17-acre lease out of Section 1, S. A. & M. G. Survey, A-849. Same company's No. 1 R. H. Mauldin, 150 feet north and west of the SE cor. of the R. H. Mauldin 171-acre tract out of Section 1, S. A. & M. G. Survey, A-849. Humble Oil & Refining Co.'s No. 13 A. W. Armstrong, 150 feet south and 1,062 feet east of the NW cor. of Section 1, Juan Delgado Survey, No. 785. Same company's No. 8 Jim Gilbreath, 150 feet south and 537 feet west of the NE cor. of its lease out of the R. F. Debord Survey, A-2,136.

Logan & Carter's No. 1 J. F. Marfield, 150 feet north and 200 feet east of the SW cor. of the east 80 acres of the south 250 acres of the F. Furlonge Survey No. 653. Neiswanger and others' No. 1 B. S. Boysen, 50 feet north and 950 feet east of the SW cor. of the north 40 acres of the B. S. Boysen 160-acre tract out of the H. Pressler Survey, A-2,041. Selby Oil & Gas Co.'s No. 18 H. J. Ellis, 1,010 feet south and 150 feet west of the NE cor. of its lease out of Section 3, S. A. & M. G. Survey, A-850. Same company's No. 19 J. H. Ellis, 1,310 feet south and 150 feet west of the NE cor. of its lease out of Section 3, S. A. & M. G. Survey, A-850. Warren Development Co.'s No. 2 S. O. Looper, 518 feet north and 150 feet west of the SW cor. of the A. C. Evans 106.5-acre tract and located on the S. O. Looper 320-acre tract out of the J. Woodward Survey No. 20. Wheelock & Collins' No. 2 M. L. Smith, 150 feet south and 450 feet east of the NW cor. of the south 40 acres of the M. L. Smith 87.25-acre tract out of Section 3, S. A. & M. G. Survey, A-850.

Clark and others' No. 2 H. J. Guyer, 150 feet north and 450 feet east of the SW cor. of the H. J. Guyer 65-acre tract out of the Manuel M. Flores Survey No. 614, A-316. Same company's No. 3 H. J. Guyer, 150 feet north and 750 feet east of the SW cor. of the H. J. Guyer 65-acre tract out of the Manuel M. Flores Survey No. 614, A-316. Ditto Oil Interests' No. 1 C. E. Taylor, 165 feet north and 155 feet west of the SE cor. of the T. M. Whittington Survey, A-948. Van Bibber & Lehman's No. 2 A. C. Evans, 150 feet north and 750 feet east of the SW cor. of the A. C. Evans 106.5-acre tract out of the J. Woodward Survey No 20. Gulf Production Co.'s No. 1 J. C. Hall-A, 1,000 feet north and 1,100 feet west of the SE cor. of Lot 9, Flourney Hunt Survey, A-396.

Callahan County

Goodloe & Duffy's No. 1 F. L. Alvord, 150 feet north and 174 feet east of the SW cor. of NW of Section 75, Bayland Orphan Asylum Lands. National Refining Co.'s No. 1 Hugh Moore, 150 feet north and 452 feet west of the SE cor. of the NW of the NE of Section 9, Block 6, S. P. R. R. Prairie Oil & Gas Co.'s No. 3 Ida Webb, 150 feet north and 450 feet west of the SE cor. of the Ida Webb tract out of the G. M. Vigal Survey No 798. Reid & Groce's No. 1 Mrs. E. C. Hood, 150 feet south and east of the NW cor. of the SE of Section 29, Deaf & Dumb Asylum Lands. Same company's No. 1 A. R. Kelton, 150 feet north and west of the SE cor. of the north half of Section 130, B. B. B. & C. Survey.

Coleman County

Barbee & Ross' No. 1 J. E McCord estate, 1,460 feet south and 868 feet east of NW cor. of Section 41, B. B. B. & C. Survey. Same company's No. 1 O. A. & D. N. Williams, 550 feet south and 190 feet east of the SE cor. of the J. R. Merrill Survey No. 10, A-1,349, and located in the H. M. Childress Survey No. 73, A-1,032 Jameson & Murray's No. 1 John R. Havens, 150 feet south and east of the NW cor. of the east half of the John R. Havens 100-acre tract out of Section 3, Coleman County School Lands No. 57. Roth & Faurot's No. 1 J. E. and T. L. Stevens, 330 feet south and 250 feet east of the NW cor. of Section 5, Coleman County School Lands No. 57. Anzac Oil Co. and Continental Oil Co.'s No. 1 M. T. Overall-D, 1,100 feet south and 1,600 feet east of the NW cor. of Section 10, Block 1, G. H. & H. Bucher & Ertel's No. 2 George Rae, 885 feet north and 3,087 feet west of the SE cor. of the J. B. Beall Survey No. 301. Hoffman & Page's No. 1 A. Horne, 150 feet north and 628 feet east of the SW cor. of the R. H. Overall Survey No. 66, A-987.

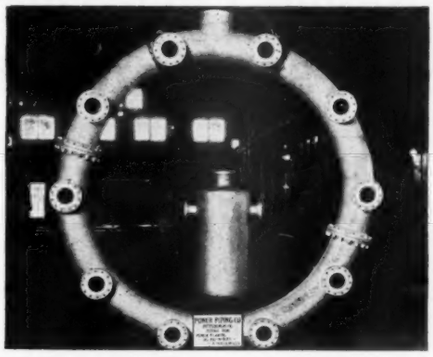
Cooke County

Continental Oil Co.'s No. 2 J. Koelzer, 125 feet north and 110 feet west of the SE cor. of Section 4, Thomas Scott Survey, A-900.

Crane County

Crane Development Co.'s No 1 J. R. Mosley, 330 feet northwest of the southeast line and 330 feet northeast of the southwest line of Section 18, Block 6, H. & T. C. J. K. Hughes and others' No. 1 State Bank Commission, 2,640 feet southwest of the northeast line and 330 feet northwest of the southeast line of Section 18, Block 4, H. & T. C. Prairie Oil & Gas Co.'s No. 8 State-Lasseter, 330 feet south and 990 feet west of the NE cor. of Section 47, Block 30, University Land. Gulf Production Co.'s No. 3 W. N. Waddell, 330 feet north and west of

EFFICIENT WELDED EQUIPMENT



Circular header with welded outlets.

Receiver separator shown in background.

The unique advantages of welded piping equipment for certain requirements are now fully recognized by engineers everywhere. We can offer original and appropriate suggestions tending toward more efficient, less costly installations.

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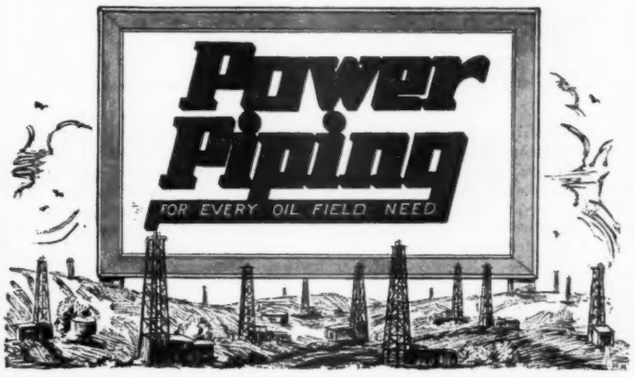

Photograph showing construction of Gulf Pipe Line near Seminole, Okla. Machine laying 400 to 500 joints every day.

One of our machines has record of laying over three miles of 8 inch pipe in one day. Another laid 8000 feet of 10 inch pipe and another laid 7000 feet of 12 inch pipe in one day's run. The work was perfect. There were no leaks or breaks in lines.

With our machine the necessary bends are made "right now." Even 10 and 12 inch pipe is BENT COLD.

Machines for laying all sizes from four to twelve inch pipe for sale or lease.

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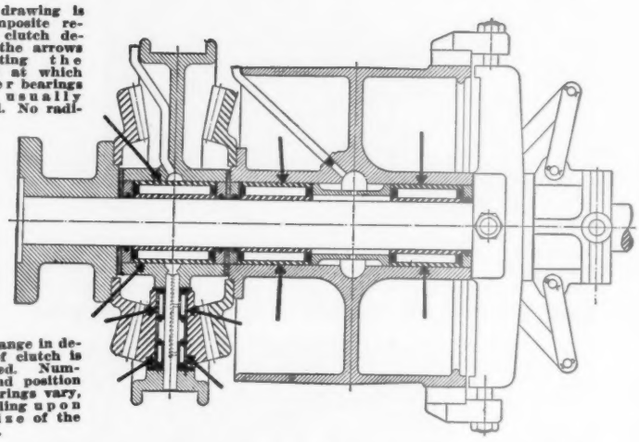
IF You Want Better Results From Your Reverse Clutches

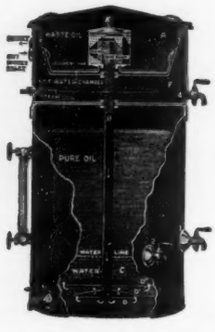


This drawing is a composite reverse clutch design, the arrows indicating the points at which roller bearings are usually placed. No radical change in design of clutch is required. Number and position of bearings vary, depending upon the size of the clutch.

Advanced oil field engineering calls for better Reverse Clutches. Deeper drilling practice requires them. The more progressive manufacturers are preparing to fill the need with American Heavy Duty Type "C" Roller Bearings. Where they are installed there will be no more burned-out bearings, leaky lubrication, failure from overloads —the three sources of grief in many of the poorly designed clutches offered for drilling service.

AMERICAN
HEAVY DUTY TYPE "C"
ROLLER BEARINGS

BURT
American Oil Filter



This type BURT Oil Filter is recommended especially for cleaning lard, cylinder, crankcase and other grades of heavy oil.

The filtering of heavy oils is almost impossible with other type filters due to the fact that they become clogged almost at once. This is eliminated in the American type filter because a hot water chamber at the top surrounds the unfiltered oil and renders it thin and easy flowing, so what is difficult or impossible in the case of other filters is easily accomplished by the American. Write for complete catalog. Any Burt Filter will be furnished on a 30 day free trial basis.

Do You Burn Fuel Oil?
If so we can keep your burners free from grit or dirt, hence insuring perfect combustion and a clean steady flame at all times. Specially designed and packed Burt filters do the work—write for details.

Crankcase Oil Can Be Reclaimed
so as to give same efficient service as regular fuel oil and at practically no cost.
Service stations would probably be glad to have you haul it away. Also provides storage capacity which can be increased if necessary with a Burt Oil Reservoir.

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929 S. High St., Akron, Ohio
Pioneer Oil Filter Manufacturers

the SE cor. of NE of Section 3, Block B-25, Public School Land.

Crockett County

Bob Penn's No 1 L. P. Powell, 1,650 feet south and 2,310 feet east of the NW cor. of Section 54, Block BB, G. C. & S. F. Survey. Van McPhail's No. 1 George Thompson, 2,200 feet south and 9,475 feet east of the NW cor. of Section 70, Block 1, I. & G. N. Survey, being 150 feet south and east of the NW cor. of Lot No. 22. Van McPhail and others' No. 1 George Thompson, 925 feet south and 7,925 feet east of the NW cor. of Section 70, Block 1, I. & G. N., being at the center of Lot No. 31.

Eastland County

Adamson & Bearman's No. 3 N. N. Rosenquest, 600 feet south and 700 feet east of the most northerly NW cor. of the N. N. Rosenquest 553.6-acre tract out of Section 3, Block 6, E. T. R. R. Barkley and others' No. 2 A. L. Duffer, 850 feet south and 250 feet east of the NW cor. of Lot No. 13, McLennan County School Land, League 2 and located in Lot No. 5. Corzelius Brothers and others' No. 1 A. J. Elliott, 400 feet north and 150 feet west of the SE cor. of the A. J. Elliott 175-acre tract out of the S. J. Robinson Survey. John Hooser's No. 4 W. U. Fox, 455 feet north and 407.8 feet east of the SW cor. of Lot No. 67, McLennan County School Land, Leagues 3 and 4, being 455 feet north and 150 feet east of the SW cor. of his lease. Mook-Texas Oil Co.'s No. 9 Minnie Subley, 950 feet south and 150 feet west of the NE cor. of Lot 9, W. Van Norman Survey. Prairie Oil & Gas Co.'s No. 3 S. H. Parsons, 150 feet south and 604 feet east of the NW cor. of the north 50.3 acres of the east 100.6 acres of Section 53, Leagues 3 and 4, McLennan County School Land. The Texas Company's No. 20 L. A. Hightower, 708 feet north and 2,769 feet east of the SW cor. of Lot No. 1, W. Van Norman Survey. McGee and others' No. 1 J. E. Langust, 3,090 feet south and 1,170 feet east of the NW cor. of Section 17, Block 2, E. T. R. R. Root and others' No. 2 A. L. Thorp, 350 feet north and 1,900 feet east of the SW cor. of NW of Section 37, Block 4, H. & T. C. Survey.

Erath County

H. B. House and others' No. 1 J. H. Gage, 2,000 feet north and 1,200 feet east of the most southerly SW cor. of Section 29, H. T. & B. Survey.

Howard County

Magnolia Petroleum Co.'s No. 9 Kelly Chalk, 2,310 feet south and 990 feet east of the NW cor. of Section 124, Block 29, W. & N. W. Survey. Marland Oil Co.'s No. 2 O. Chalk-E, 2,310 feet north and 990 feet east of the SW cor. of Section 124, Block 29, W. & N. W. Survey.

Jack County

Creighton & Shadbolt's No. 1 Jake Zuber, 823 feet south and 25 feet west of the NE cor. of the T. Kenney Survey, A-329. Craig-Lowrie & Walton's No. 4 Ira Coats, 750 feet north and 150 feet east of the SW cor. of the Ira Coats 200-acre-tract out of the Mrs. W. Berryman Survey, A-40. Kessler & Logan's No. 1 A. R. Clerihew, 150 feet north and west of SE cor. of the west half of Lot No. 30, M. Putman Survey, A-461. O'Neil & White and others' No. 1 Anna B. Street and others, 150 feet south and east of NW cor. of the south half of Section 3,330, T. E. & L.

Pecos County

Humble Oil & Refining Co.'s No. 2 M. A. Smith-B, 200 feet south and 547 feet west of NE cor. of Section 101, Block 194, G. C. & S. F. Roxana Petroleum Corp.'s No. 3 J. H. Tippett, 200 feet south and 330 feet east of the NW cor. of Section 102, Block 194, G. C. & S. F.

Shackelford County

J. O. Hyde's No. 1 R. J. Moberly, 150 feet north and west of the SE cor. of NW of NE of Section 13, Block 11, T. P. R. R.

Upton County

Southern Crude Oil Purchasing Co.'s No. 1 C. W. Hobbs, 330 feet northeast of the southwest line and 330 feet northwest of the southeast line of Section 61, Block 35, H. & T. C.

Stephens County

Dyar Brothers' No. 1 Black Brothers,

"Properly Fed" they even say so in the papers!

As previously stated, no set rules can be laid down as to just what oils will satisfactorily lubricate any certain make of engine, because of varying operating, mechanical and load conditions, but take a new engine of the usual type, properly built, installed, cooled and properly operated and maintained, a good quality paraffin base oil of 300 to 350 seconds viscosity, or asphalt base oil of 500 to 550 seconds viscosity, properly fed should give good results. The viscosity of these two oils mentioned will be practically the same at 210 degrees Fahrenheit

Lubrication has always meant "selection of good oil and applying it properly to all friction points," otherwise all effort to avoid friction is lost.
Hills-McCanna Lubricators were the first in the field of Force-Feed Lubrication. Their mechanism measures the amount of oil to be fed—forcing it to delivery point regardless of counteracting influences—and giving visible evidence that the oil is actually reaching its destination.
Equip your compressors, pumps and other auxiliaries the definite Hills-McCanna Way! There is a type for every need from 1 to 60 feeds.

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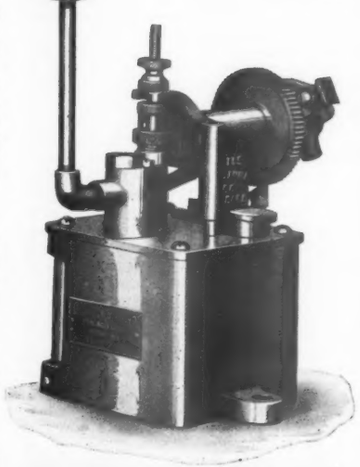
HILLS-McCANNA
FORCE FEED
Lubricators



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SPEED REDUCERS
CHEMICAL PUMPS

Accurate information concerning every activity of the Petroleum Industry is becoming more and more valuable. It is absolutely essential to the man who wishes to make a success in the Oil Business.

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330 feet south and 1,368 feet east of the NW cor. of Section 24, Block 4, S. P. R. R. Hanlon Gasoline Co.'s No. 1 H. E. Wilson, 1,480 feet north and 1,150 feet west of SE cor. of Section 2,099, T. E. & L.

Wichita County

Magnolia Petroleum Co.'s No. 136 H. Reilly, 1,850 feet north and 1,700 feet east of the SW cor. of J. Ellis Survey, A-175. W. H. Hammon and others' No. 1 T. F. Mitchell, 150 feet north and east of SW cor. of Lot No. 3, Mitchell Subdivision, P. Castleman Survey, A-36. A. T. McDannald's No. 1 C. A. Allingham, 1,950 feet north and 150 feet west of the SE cor. of Section 32, Block 5, H. & T. C., A-504, being 150 feet north and west of the SE cor. of his 40-acre lease. Stidham & Thrasher's No. 1 N. H. Martin, 649 feet south and 450 feet west of the NE cor. of Section 12, B. S. & F. Survey, A-744. The Texas Company's No. 338 W. T. Waggoner, 553 feet south and 1,988 feet east of NW cor. of Section 2, Seale & Morris Survey, A-535, and located in the F. J. Cook Survey, A-553. The Texas Company's No. 339 W. T. Waggoner, 2,310 feet south and 402 feet west of the NE cor. of the J. Bradley Survey, A-13. The Texas Company's No. 340 W. T. Waggoner, 990 feet south and 1,650 feet east of the SW cor. of Section 19, G. C. & S. F., A-359, and located in the T. C. R. R. Survey, Section 1.

Wilbarger County

J. B. Barnes' No. 2 G. B. Ancell, 450 feet north and 150 feet west of SE cor. of Section 2, Block 7, H. & T. C. Murchison Oil Co.'s No. 1 W. T. Waggoner-D, 150 feet south and west of the NE cor. of the west 40 acres of the south 160 acres of Section 3, S. P. R. R. Petroleum Producers Co. and others' No. 1 W. T. Waggoner-A, 150 feet north and west of the SE cor. of NE of NE of Section 16, Block 4, H. & T. C. Phillips Petroleum Co.'s No. 1 W. T. Waggoner-MM, 195 feet north and west of the SE cor. of NW of NE of Section 30, Block 4, H. & T. C.

Winkler County

Southern Crude Oil Purchasing Co.'s No. 3 Ida Hendrick, T-88-C, 1,650 feet south and 330 feet east of the NW cor. of Section 28, Block B-5, School Land. Same company's No. 4 Ida Hendrick, T-88-C, 2,310 feet south and 330 feet east of the NW cor. of Section 28, Block B-5, School Land. Same company's No. 5 Ida Hendrick, T-88-C, 990 feet south and 1,650 feet east of NW cor. of Section 28, Block B-5, School Land. Same company's No. 6 Ida Hendrick, T-88-C, 1,650 feet south and 990 feet east of NW cor. of Section 28, Block B-5, School Land. L. C. Thurman and others' No. 2 Ida Hendrick, 990 feet south and 330 feet west of the NE cor. of Section 29, Block B-5, School Land.

Young County

Parker and others' No. 1 T. L. Oliver, 1,211 feet south and 150 feet east of the NW cor. of the west 200 acres of Section 1,940, T. E. & L. Pitzer & West's No. 1 J. T. Callahan, 200 feet north and west of the SE cor. of the east 45 acres of the north 154.1 acres of the Paul Pier Survey, A-219. Pitzer & West and other's No. 2 A. M. Graham estate, 1,120 feet north and 570 feet west of the SE cor. of the Paul Pier Survey, A-219. Same company's No. 3 A. M. Graham estate, 743 feet north and 200 feet west of the SE cor. of the Paul Pier Survey, A-219. Ramsey & Decker and others' No. 3 S. I. Payne, 150 feet south and 540 feet east of the NW cor. of the J. J. James Survey, A-1,327. Seaboard Oil & Gas Co. and Nash & Windfohr's No. 2 Sam Ragland, 235 feet north and 200 feet west of the SE cor. of the east 40 acres of the west 80 acres of the south 120 acres of the north 182 acres of the J. W. Manning Survey, A-188. Simms Oil Co.'s No. 1 Sam Ragland, 182 feet south and 200 feet west of the NE cor. of the B. Hill Survey, A-137. Smor Oil Co.'s No. 1 R. J. Robertson, 1,867 feet southwest of the northeast line and 240 feet northwest of the southeast line of Section 1,577, T. E. & L.

Corrected Locations

In Archer County: Panhandle Refining Co.'s No. 1 E. Colgin, 1,705 feet

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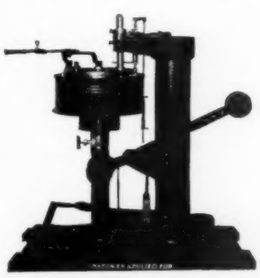

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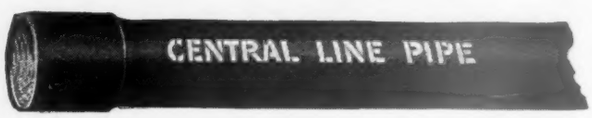

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south and 150 feet west of the NE cor. of the J. F. Martin Survey, A-276.

In Brown County: Van Bibber & Lehman's No. 1 A. C. Evans, 518 feet north and 821 feet east of the SW cor. of the A. C. Evans 106.5-acre tract out of the James Woodward Survey No. 20, A-964.

In Callahan County: Tollett & Graham's No. 1 F. L. Alvord, 150 feet north and 174 feet west of the SE cor. of the NE of Section 76, Bayland Orphan Asylum Land. J. E. Kelly and others' No. 1 J. M. Radford, 150 feet south and east of the NW cor. of the SE of Section 79, Blind Orphan Asylum Lands.

In Coleman County: Kenwood Oil Corp.'s No. 2 T. H. Ward, 1,320 feet north and 1,200 feet west of SE cor. of the William Eckols Survey No. 274. E. J. Cunningham's No. 1 G. W. and L. P. Jennings, 1,300 feet south and 2,100 feet west of the NE cor. of the G. W. and L. P. Jennings 190.37-acre tract out of the A. S. Lipscomb Survey No. 94.

In Cooke County: N. H. Martin and others' No. 1 Peter Bindle, 110 feet north of the center of the road and 150 feet east of the west line of Block 81, Town of Muenster.

In Eastland County: John Hooser's No. 3 W. U. Fox, 150 feet north and 674 feet west of the SE cor. of Section 67, Leagues 3 and 4, McLennan County School Land, being 150 feet north and west of the most westerly SE cor. of his lease.

In Montague County: Bridwell & Heydrick's No. 2 Mrs. M. H. Salmon-A, 1,800 feet south and 1,500 feet east of the NW cor. of the Mrs. M. H. Salmon 421-acre tract out of the F. Robertson Survey, A-620, being 450 feet south and 150 feet east of the NW cor. of their 62-acre "A" lease.

In Winkler County: Eastland Oil Co. and others' No. 1 Grisham-Hunter, 2,640 feet south and 1,650 feet east of the NW cor. of Section 35, Block B-5, School Lands.

PIPE LINES REPAIRED IN FLOOD-SWEPT AREA

(Continued from Page 104)

Co. under the personal direction of Ray McGrew, president, and B. F. Fisher, superintendent.

Establishing a camp the pipe line crew was the first perplexity. When the water broke through the levee it covered all that country for miles with the exception of a very small strip of land and a stretch of the levee some distance from the station. On this bit of land in the sea of water the camp was set up. From here all work done had to be done from boats.

The next problem was to obtain supplies, not only for the camp but also timbers, pipe and other heavy equipment to repair the lines. All rail connection with Melville was washed out and the entire town itself was under water. The nearest "port" was Washington, 35 miles west. Everything east was flooded to the Mississippi River. Transporting the heavy equipment by boat a distance of 35 miles was no small job, but it was accomplished. There was one favorable thing about the situation. The boats did not have to flow any particular course, but just set out across the flooded country with their cumbersome loads.

Pontoons Employed

In spanning the treacherous current with the lines, the company was fortunate in that a short stretch of railroad trestle had failed to go out when the water swept through and this remained high and dry over some of the worst of the swift water. By pontoons and boats ends of the broken lines on either side of the current were raised and connections made over to the stretch of high land and remaining railroad trestle, across which a welded line was strung. Over part of the water the company had to build its own trestle to support the pipe.

This established temporary line connections and crude was started through them as fast as each line was raised. This, however, did not put the lines on full capacity as the oil had to be pumped clear through from Bunkie, the next station above. Later when the water went down

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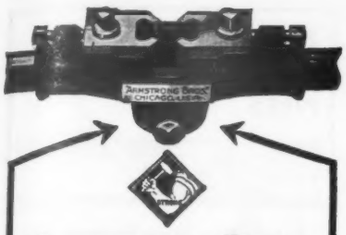

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the lines were replaced under ground through their original right of way.

Reclaiming the station probably was one of the most serious propositions. The 14 Diesel engines, 13 large ones and 1 light 40 horsepower engine, together with all pumps and other working machinery around the plant were almost completely buried by the water and sand for weeks. The water itself did not recede until in July. In addition to the enormous job of excavating there was the task of getting the machinery in working order after the sand and silt had been removed.

Mountains of Sand Left

Engineers of the company now are attempting to figure up the amount of sand excavated from around the plant and station grounds. Removal of the sand has necessitated mountainous heaps of it where it had to be dumped, and what once was a flat plain now is a country of sandy hills. Digging out of the sand has not been completed except on the land immediately surrounding the station and it is not likely that the entire tract owned by the company ever will be cleared entirely.

Renovating the engines and making certain that every particle of sand and rust was removed from the working parts was the most delicate work. This was possible only by a complete tearing down of the engines and taking every bolt and part to pieces and washing it thoroughly. This was a tedious job, but, after much labor, was completed in the middle part of September. The engines were not taken from their bases but otherwise they were completely dismantled.

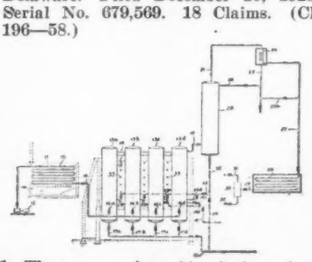
One Serious Accident

The company had only one serious accident in the flood at Melville. An oil leak had appeared in one of the submerged buildings and a cofferdam was being built up to hold back the flood waters so as to enable the workers to get at the leak. A thin scum of oil surrounded the building inside the cofferdam and when one laborer, in hewing a timber with an axe, struck a nail, a spark ignited the oil. The sudden blaze forced the laborers to jump back into the flood waters. All except two negroes were rescued by boats. One of the negroes' bodies never has been found. The fire quickly flared out.

This is the fourth time this station has been flooded, although never before has the water risen more than 2 or 3 feet, and each time, except the first, protection was provided so the plant could be kept in operation. The first flood which hit it was when the station was being built in 1912. All construction work had to be suspended until the water receded. Considerable damage was done at that time. Mr. Fisher, the present superintendent of main lines, and stations, had charge of the building of the station.

Recent Patents

1,646,380. Treating Hydrocarbon Oils. Ralph C. Holmes, New York; Frederick T. Manley, Houston, and Otto Behimer, Port Arthur, Tex., assignors, by mesne assignments to The Texas Company, New York, a corporation of Delaware. Filed December 10, 1923. Serial No. 679,569. 18 Claims. (Cl. 196—58.)



1. The process of cracking hydrocarbon oils which comprises heating the oil to substantially a cracking temperature, passing the heated oil into a plurality of converters wherein cracking conditions are maintained, condensing a portion of the generated vapors and selectively refluxing said condensate to the several converters.

12. Apparatus for cracking hydrocar-

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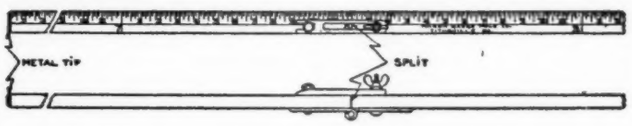

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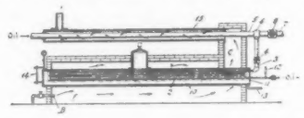
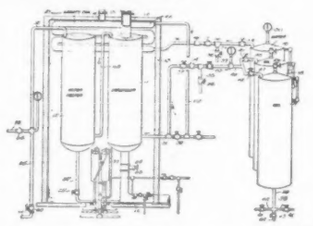
bon oils comprising a plurality of stills, vapor equalizing and liquid level lines interconnecting the stills in series, means for introducing oil to the stills comprising a manifold line with valved branches to the several stills adapted to selectively admit the oil to the stills severally, a reflux condenser adapted to receive vapors from the stills and means for returning condensate from said reflux condenser to the several stills comprising a manifold line with valved branches to the several stills.

16,778. Apparatus for Treating Oil. George C. Kelley, Taft, Calif. Filed May 5, 1925. Serial No. 28,252. Original No. 1,465,398, dated August 21, 1923, Serial No. 402,467, filed August 9, 1920. 7 Claims. (Cl. 196—5.)



1. An apparatus for treating oil to facilitate the separation of undesirable concomitants, comprising, a hot water drum, a horizontally arranged passage for the oil in the drum, said passage being of continuously restricted cross sectional area so as to avoid free spaces and a consequent turbulent condition in the oil, means for heating the oil as it flows through said passage in an uninterrupted confined column, so as to impart thereto the maximum heat treatment for the desired condition of the oil and a flue for the combustion gases from said heating means having an oil conduit therein arranged as a preheater for gradually heating the oil before it enters into the said passage.

1,647,026. Process for Destructive Distillation of Hydrocarbons. Charles Worth Turner, New York, N. Y. Filed July 25, 1923. Serial No. 653,722. One claim. (Cl. 196—63.)



The herein described process of distilling hydrocarbon oil, consisting in forming a mixture of oil and steam in one of a pair of large vertical containers, heating the mixture, causing the same to flow in a restricted stream to the bottom of the other container, whereby it is caused to expand and flow vertically to the top of the latter, conducting the heated vapor in a restricted stream to the bottom of one of another pair of large vertical containers, whereby it is again caused to expand and travel in a vertical direction to the top of the same, heating the second pair of containers to a very high temperature, conducting the heated vapor in a restricted stream to the bottom of the other container, whereby it is caused to expand and is heated therein to a temperature of approximately 2,000 degrees Fahrenheit and subsequently fractionating the vapors.

LEGAL

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December 6, 1927, at Pawhuska, Oklahoma, about 19,360 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual installments, with acceptable security. Within advertised area there are about 9,903 oil wells producing from one barrel to 1,000 barrels each, the total daily production for September, 1927, being about 62,000 barrels; also there are about 60 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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Detailed Operations in All Fields for Month of October

SUMMARY OF ALL FIELDS

Field—	Comp.	Prod.	Dry	Gas
Eastern	358	1,350	34	65
Central Ohio	36	186	6	24
Lima	25	318	2	2
Indiana	27	370	9	5
Illinois	15	107	8	1
Michigan	39	275	16	2
Kentucky	106	2,595	37	5
Tennessee	14	904	1	1
Mississippi	1	0	1	0
Oklahoma	410	170,816	125	52
Florida	2	0	2	0
Kansas	82	4,540	26	5
Texas Panhandle	46	10,320	12	14
North Central Texas	220	11,589	98	9
West Texas	43	58,971	12	0
Southwest Texas	57	474	31	10
East Texas	14	591	10	0
Louisiana	55	965	22	26
Arkansas	27	1,056	12	2
Wyoming	26	2,318	2	0
Montana	60	2,190	30	5
Colorado	12	837	6	0
New Mexico	13	150	11	1
Gulf Coast	89	44,990	37	3
Utah	2	0	2	0
Total October	1,809	315,912	552	232
Total September	1,779	304,668	547	260
Difference	3	11,244	5	28

Summary of New Work

Field—	Rigs	Drg.	Ttl.
Eastern	115	373	488
Central Ohio	12	73	85
Lima	3	26	29
Indiana	10	52	62
Illinois	0	27	27
Michigan	2	21	23
Tennessee	0	38	38
Kentucky	6	123	129
Mississippi	11	18	29
Alabama	0	7	7
Florida	0	12	12
North Carolina	0	1	1
Oklahoma	125	864	989
Kansas	39	178	217
Texas Panhandle	27	149	176
West Texas	127	266	393
North Central Texas	92	364	456
Southwest Texas	24	140	164
East Texas	2	14	16
Louisiana	53	104	157
Arkansas	14	29	43
Wyoming	29	136	165
Montana	19	97	116
Colorado	5	77	82
Utah	1	25	26
New Mexico	15	104	119
Gulf Coast	32	139	171
Total October	763	3,457	4,220
Total September	684	3,643	4,327
Difference	79	186	107

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rigs and wells drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	7	105	3	0
Creek	42	2,960	14	6
Garfield	7	0	7	0
Grady	19	259	8	5
Hughes	7	0	4	3
Kay	17	804	8	7
Muskogee and Wagoner	21	205	14	4
Okfuskee	7	2,080	3	2
Okmulgee	16	954	4	1
Osage	21	4,516	5	8
Payne and Lincoln	8	0	7	1
Pontotoc and Garvin	9	331	4	2
Pottawatomie	24	4,268	4	1
Seminole	165	154,699	30	1
Stephens and Cotton	15	158	5	3
Tulsa	7	85	0	4
Miscellaneous	18	92	5	4
Total October	410	170,816	125	52
Total September	321	167,860	128	40
Difference	89	12,956	3	12

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Carter	2	25	27
Creek	17	54	71
Garfield	1	20	21
Grady	3	42	45
Grant	2	10	12
Hughes	1	11	12
Kay	5	23	28
Logan	3	21	24
Muskogee and Wagoner	3	25	28
Okfuskee	9	21	30
Okmulgee	12	34	46
Osage	12	34	46
Payne and Lincoln	2	17	19
Pawnee	2	9	11
Pontotoc and Garvin	8	41	49
Pottawatomie	4	58	62
Seminole	28	322	350
Stephens and Cotton	5	22	27
Tulsa	1	13	14
Miscellaneous	5	61	66
Total October	125	864	989
Total September	142	1,009	1,151
Difference	17	145	162

WELLS COMPLETED
CREEK COUNTY

19-19- 8 Shiley, Steinberger & Smith 1. gas
36-15- 7 Bigpond, Empire G. & F. Co. 1 45
15-15- 8 Byrd, Roxana Pet. Corp 1.... gas
22-18-11 Crews, Cross et al 1 ..... dry
13-27-10 Strip, Cumberland Oil Co. 3... dry
Strip, J. R. Cole 4 60
23-17-10 Tahkaney, J. H. Wright 18 ... 70
9-17-11 Inman, Liza Tim Oil Co. 3 .... dry
21-16- 9 Jacobs, L. Emery & Sons 8.... dry
18-14-10 Wolfe, Independent O. & G. 1. 535
13-17- 8 Harjo, Ocean Pet. Co. 2 100
20-18- 9 Francis, The Texas Company 1 dry
5-17-10 Francis, Dixie Oil Co. 5 50
13-17-10 Fulsom, Pontiac Oil Co. 8..... 500
14-17-10 Baker, The Texas Company 1. 55
32-17-10 Yellowhead, Skelly Oil Co. 2... 35
5-16-11 Fulsom, Devonian Oil Co. 4.... dry
27-15- 8 Grayson, Independent O. & G. and Tibbens 1 ..... dry
23-18-11 Warren, Prod. & Refg. Corp. 1 gas
George, A. E. Purser et al 1... dry
4-18-12 Jackson, C. G. Tibbens 1 ..... gas
13-17-10 Fulsom, Pontiac Oil Co. 9..... 25
4-17-11 Abraham, Peters Pet. Co. 2 .... dry
16-16- 9 McNack, Nowata O. & R. Co. 4 25
19-14- 9 Abraham, Atlantic O. P. Co. and Phillips Pet. Co. 1 ..... dry
17-19- 9 Murrell, Redlister Oil Co. 3.... 10
31-19- 9 Cares, Evans Bros. 1 ..... gas
19-18- 9 Washington, Sapulpa Fuel Co. 1 dry
24-18-11 Burnett, Kennedy & Horner et al 1 ..... gas
1-17- 9 Bowlegs, Dixie Drlg. Co. 3.... 20
13-17-10 Farley, O. M. Irelan 3 75
Brink, Ted Ray 6 35
16-17-11 Wilson, Thompson & Black 4.. dry
23-16-10 Bowers, Kawfield Oil Co. 1... dry
2-16-11 Beham, Future Dev. Co. 2 25
18-14-10 Dixon, Wilcox O. & G. Co. 3.. 600
12-19- 8 ———, J. B. Grieves 3 35
32-17-10 Yellowhead, Skelly Oil Co. 2.. 35
4-17-11 Abbott, Henry Oil Co. 1 ..... dry
18-14-10 Harjo, Prod. & Refg. Corp. 3. 460
20-14-10 Scott, Donnelly et al 3 25
33-15- 7 Sheppard, Prairie O. & G. Co. 1 140

Wells completed 42
Production 2960
Dry 14
Gas 6
Gas production 35,000,000

CARTER COUNTY

10-2s-3w Adams, Magnolia Pet. Co. 13. 33
14-1s-3w Pollock, Magnolia Pet. Co. 1-B dry
26-2s-3w Schwartz, Magnolia Pet. Co. 8 dry
3-2s-3w Pruitt, Franklin & Prairie 6.. 15
22-2s-3w Morris, Magnolia Pet. Co. 3... dry
15-2s-2w Cox, Magnolia Pet. Co. 4..... 7
10-1s-3w Denny, Roxana Pet. Corp. 1.. 50

Wells completed 7
Production 105
Dry 3

GARFIELD COUNTY

29-23-4w Brunken, Roxana Pet. Corp. 1 dry
20-22-3w Mathis, Beopple et al 1..... dry
26-22-4w Bangerter, Sinclair O. & G. Co. 3 ..... dry
Bangerter, Sinclair O. & G. 4 dry
Crooks, Chas. Knox 6 ..... dry
Crooks, Chas. Knox 7 ..... dry
Crooks, Chas. Knox 8 ..... dry

Wells completed 7
Dry 7

GRADY COUNTY

2-4-8w Woods, Meridian Gas Co. 2... gas
11-4-8w Williams, Sinclair O. & G. Co. 2 gas
8-3-5w Horton, Carter Oil Co. 1..... 22
17-3-5w Woods, Marland Oil Co. and Joe Ray 2 ..... dry
21-3-5w Wall, Carter Oil Co. 2..... 100
22-3-5w Miller, Carter Oil Co. 2..... 15
25-3-5w Graham, Magnolia Pet. Co. 1.. dry
2-4-8w Dryden, Okla. Nat. Gas Corp. 2 gas
5-3-5w Gardenire, Amerada Pet. Corp. 1 dry
16-3-5w Burke, Marland Oil Co. 3..... 7
17-3-5w Woods, Garvin Drlg. Co. 1.... gas
21-3-5w M. Kerans, Carter Oil Co. 3.. dry
27-3-5w Cochran, Magnolia Pet. Co. 3.. dry
21-3-5w Russell, Prairie O. & G. Co. 6.. 30
17-4-6w Pursley, Gant et al 1 ..... gas
17-3-5w Burke, Marland Oil Co. 1..... 85
34-3-5w Mitchell, Magnolia Pet. Co. 4.. dry
21-4-5w Benn, Gant et al 1 ..... dry
34-3-5w Wham, Carter Oil Co. 8..... dry

Wells completed 19
Production 259
Dry 8
Gas 5
Gas production 75,000,000

HUGHES COUNTY

15-10-9 Bruner, Kingwood Oil et al 1.. gas
16-10-9 Bruner, Kin-Cont. Pet. Corp. 1. dry
Tecumseh, Independ. O. & G. 2 gas
20-10-9 Bruner, Future Dev. Co. and Schermerhorn 1 ..... gas
4- 9-9 Alexander, Berry Pet. Co. 5 .... dry
15- 8-9 McGrit, Burke Greis 1 ..... dry
27- 7-8 Amerday, Roxana Pet. Corp. 2-A dry

Wells completed 7
Dry 4
Gas 3
Gas production 110,000,000

KAY COUNTY

29-29-1w Judd, Comar Oil Co. 1 ..... dry
17-29-1e Swinson, Harris & Hahn 2-A... gas
5-28-1w McCullough, Comar Oil Co. 2½. gas
29-27-1w Chambers, O'Kansas Oil Co. 1. dry
30-27-1w Woods, Larutan Fuel Co. 2-A.. gas
31-25-1w Poole, Mid-Co Oil Co. 1 ..... dry
19-27-1w Hall, Sinclair O. & G. Co. 1 ... gas
29-27-1w Rembe, Chas. Balph et al 1 .. dry
30-27-1w Woods, Larutan Fuel Co. 3-A.. gas
34-25-2 Sandsyellow, Boucher et al 1.. dry
14-27-3w Elswick, Kay Oil Co. 1 755
30-27-1w Woods, Larutan Fuel Co. 4-A.. dry
31-27-2e Myer, Anderson & Peterson 1.. dry
Garrett, Comar Oil Co. 1 49
15-29-1w Henzel, Harris & Hahn 2 ..... gas
2-25-2w Cunningham, Elk Prod. Co. 1.. dry
4-27-1w Case, Harold Pet. Co. 6 ..... gas

Wells completed 17
Production 804
Dry 8
Gas 7
Gas production 18,365,700

MUSKOGEE AND WAGONER COUNTIES

12-18-17 McIntosh, A. A. Williams 3.... dry
6-17-15 Apucka, W. O. Dickinson 1 ... dry
7-17-16 Cousins, R. H. Perry 3 ..... dry
9-15-16 Rulison, H. W. Lampton 1 .... dry
24-15-17 Davidson, P. H. Stein et al 4.. dry
12-18-17 McIntosh, A. A. Williams 4 ... dry
21-17-15 Dan, W. McDougal 1 ..... gas
1-14-18 Francis, J. Henigman et al 1.. dry
5-14-19 Crittenden, Sunray Oil Co. 8 .. 75
14-15-17 Bruner, E. H. Neal et al 1 .... dry
16-15-18 Love, D. C. Lampton 1 ..... dry
11-18-15 J. Luckey, Cartwright & Kyle 4 dry
31-18-15 Johnson, W. R. Rowland et al 1-A ..... dry
36-17-17 Barnett, C. R. Cane et al 1 ... dry
24-15-19 Vann, J. R. Parks 1 ..... dry
5-14-19 Crittenden, Sunray Oil Co. 9 .. 40
24-13-18 Kelly, Sioux Oil Co. 3 ..... gas
34-18-16 Burgess, J. E. Martin 1 ..... dry
28-15-16 Beams, Jack Summers 1 ..... gas
18-14-17 James, W. A. Peterson 6 90
11-14-18 Stidham, J. L. Dixon et al 4... gas

Wells completed 21
Production 205
Dry 14
Gas 4
Gas production 11,000,000

OKFUSKEE COUNTY

32-12-11 Carolina, Josey Oil Co. 1 40
28-12-11 Stubblefield, Josey Oil Co. 1... dry
27-12-11 Holmes, Joe Hartman 1-A .... dry
31-10-12 Fields, W. L. Umburn 2 ..... dry
36-11- 9 Deer, Burk Greis 2 ..... gas
30-11-11 Holmes, Minnehoma Oil Co. 1..2040
16-10- 9 Jones, Gibson et al 2 ..... gas

Wells completed 7
Production 2080
Dry 3
Gas 2
Gas production 41,000,000

OKMULGEE COUNTY

26-15-12 Briscoe, Briscoe et al 1 ..... dry
15-13-12 Morton, Sheldon Oil Co. et al 1 75
10-15-14 B. Carter, F. D. Misener et al 3 50
17-14-13 Berryhill, L. Neal et al 1 ..... dry
10-15-14 Carter, F. D. Misner 3 20
3-11-12 Calloway, B. Martin 2 ..... gas
10-14-14 Stevens, J. L. Selby 8 15
18-14-15 Rentie, F. A. Roberts 7 10
34-16-14 Bruner, Harsha & Delaney 2.. 10
10-15-14 Lowery, F. D. Misner & Mid-Continent. Pet. 1 40
Skidmore, W. B. Pine 1 15
14-14-14 D. Colbert, J. E. Wallace 3.... 10
17-13-14 Eubanks, McNutt & Davis 1 2
19-12-13 Simer, Tiger Mtn. Oil Co. 1 ... dry
12-15-14 Scott, E. B. Grubbs 1 ..... dry
17-15-13 Bell, Kirkland & Son 6 7

Wells completed 16
Production 254
Dry 4
Gas 1
Gas production 75,000,000

OSAGE COUNTY

6-27-11 Osage Gas Prod. Co. 380 ..... gas
I. T. I. Oil Co. 377 ..... gas
11-26- 6 Geo. Parker 1 1105
26-25- 9 Peters, Pet. Co. 2 90
33-22-11 Oklahoma Nat. Gas Corp. 774.. gas
17-27-11 I. T. I. Oil Co. 373 ..... gas
3-26-11 I. T. I. Oil Co. 373 ..... gas
11-26-11 I. T. I. Oil Co. 218 ..... dry
34-24-10 Plains Pet. Co. 1 ..... dry
28-26-11 I. T. I. Oil Co. 366 ..... gas
23-25- 9 Peters Pet. Co. 1 ..... dry
22-27-11 I. T. I. Oil Co. 372 35
3-26- 6 Galt Brown Oil Co. 1 37
Kewanee O. & G. Co. 3 1212
Kewanee O. & G. Co. 4 1237
Peters Pet. Co. 1 750
11-26- 6 Geo. Parker 3 ..... dry
5-26- 6 Moore et al 1 ..... dry
1-25-11 I. T. I. Oil Co. 374 ..... gas
20-25-12 I. T. I. Oil Co. 34 ..... gas
36-22- 8 H. H. Mundy 1 50
14-21- 8 Pueblo Pet. Co. 3 ..... dry

Wells completed 21
Production 4516
Dry 5
Gas 8
Gas production 23,250,000

PAYNE AND LINCOLN COUNTIES

10-19-1w Lemons, Marland Oil Co. et al 1 dry
33-19-5 Curley Chief, Wood Oil Co. 1.. gas
30-17-5 West, Carter Oil Co. 1 ..... dry
10-13-6 Bledsoe, Wilcox O. & G. Co. 1. dry
8-18-4 Axtell, Pure Oil Co. 2 ..... dry
33-17-4 Ward, Empire G. & F. Co. 1 .. dry
28-16-7 Walker, F. R. Billingslea 1 ... dry
20-15-6 Pickerel, Madden & Madden 1. dry

Wells completed 8
Dry 7
Gas 1
Gas production 10,000,000

PONTOTOC AND GARVIN COUNTIES

33-5-6 Price, T. P. C. & O. Co. 1 ..... dry
34-5-6 Wray, American O. & R. Co. 2. gas
35-5-6 Harjo, Louisiana O. R. Co. 3.... 226
10-4-6 Calcorps, American O. & R. Co. 4 ..... dry
17-1-3w Derdeyn, Mid-Continent Pet. Corp. 1 15
16-5-8 Milner, Homaokia Oil Co. 3 90
9-4-6 Stark, American O. & R. Co. 3 .. gas
14-4-7 Whitney, Henry et al 1 ..... dry

Wells completed 9
Production 331
Dry 4
Gas 2
Gas production 50,000,000

POTTAWATOMIE COUNTY

4-9-5 Cowden, Magnolia Pet. Co. 2 607
8-9-5 Knapp, Independent O. & G. & Darby Pet. 4 570
9-9-5 McKinley, Mid. Continent Pet. 6. 190
16-9-5 School land, Gypsy Oil Co. 5 .... dry
34-8-4 Brandenburg, Mid-Kans. Oil Co. 1 dry
25-7-3 Saunders, Pierce Oil Corp. 1 467
36-7-3 School land, Magnolia Pet. Corp. 10
4-9-5 Holey, Barnsdall Oil Co. 2 13
24-7-3 Adkins, Magnolia Pet. Corp. 1 29
4-9-5 Cowden, Amerada Pet. Corp. 7.... 95
9-9-5 McKinley, Mid-Cont. Pet. Corp. 8 250
4-9-5 Cowden, Amerada Pet. Corp. 6.. 300
8-9-5 Hunick, Gypsy Oil Co. 1 607
8-9-5 Knapp, Independent O. & G. Darby 6.. 575
8-9-5 McFarland, Gypsy Oil Co. 4.... dry
14-7-4 Brown, Independ. O. & G. Co. et al 2 200
19-7-4 Spangy, Twin State Oil Co. 3.... 80
17-7-5 Keiner, Magnolia Pet. Corp. 1 ... 48
18-7-5 Bullock, Magnolia Pet. Corp. 1.. 29
9-9-5 McFarland, Gypsy Oil Co. 3 .... dry
13-7-4 Green, Magnolia Pet. Corp. 1.... 38
15-7-4 Davis, Magnolia Pet. Corp. 1 140
23-7-4 Fried, Independent & Darby 1... gas
30-7-4 Davis, Magnolia Pet. Corp. 2 20

Wells completed 24
Production 4268
Dry 4
Gas 1
Gas production 25,000,000

SEMINOLE COUNTY

9-10-8 Hill, Sinclair O. & G. Co. 2 .... dry
10- 9-5 Peters, Barnsdall Oil Co. 4 30
Bruner, Gypsy Oil Co. 3 2527
Bruner, Independ. O. & G. Co. 4.1430
Sullivan, Independ. O. & G. Co. 1 4724
Lena, Magnolia Pet. Corp. 2.... 100
Simpson, Magnolia Pet. Corp. 1. 62
Simpson, Magnolia Pet. Corp. 3. 16
Brown, The Texas Company 2..3180
12- 9-5 Noble, Gypsy Oil Co. 3 3302
Hollins, Sinclair O. & G. Co. 2..1905
Spencer, Skelly Oil Co. 2 1633
9- 9-6 Aldridge, Pure Oil Co. 3 480
Aldridge, Pure Oil Co. 5 1295
23- 9-6 Killing, Carter Oil Co. 12 280
34- 9-6 Strothers, Carter Oil Co. 4 40
35- 9-6 Cudjo "B," Sinclair O. & G. Co. 3 890
10- 8-6 Cumsey, Gypsy Oil Co. 4 220
11- 8-6 Ellen, Sinclair O. & G. Co. 4 ...2339
13- 8-6 Grayson, Tidal Oil Co. 1 1436
14- 8-6 Reed, Pure Oil Co. 20 534
Lacey, Shaffer O. & R. Co. 1 ..... dry
15- 8-6 Walker, Gypsy Oil Co. 3 526
36- 8-6 Wadsworth, Mid-Continent. Pet. Corp. 1 800
9- 8-8 Grisso, Magnolia Pet. Corp. 1... dry
2- 7-5 Lawson, Amerada Pet. Corp. 1.. dry
11- 8-6 Jones, Prairie O. & G. Co. 3 1440
23-11-8 Thompson, Pure Oil Co. 1-A 125
3-10-8 Price, Nowata O. & G. Co. 3 5
1- 9-5 Ingram, Barnsdall Oil Co. 1 1909
3- 9-5 Edmundson, Empire G. & F. Co. 6 ..... dry
10- 9-5 Brown, Barnsdall Oil Co. 4 1325
Simpson, Magnolia Pet. Corp. 2. 250
Brown, The Texas Company 3.. 35
11- 9-5 Davis, Barnsdall Oil Co. 1-A ... 26
B. Carter, Gypsy Oil Co. 7 2460
12- 9-5 Wadsatker, Barnsdall Oil Co. 1 1308
Hollins, Continental Oil Co. 3...1750
Barker, Empire G. & F. Co. 1 60
Noble, Gypsy Oil Co. 2 7952
3- 9-6 Mandler, Carter Oil Co. 1 35
Polly, Sinclair O. & G. Co. 3 910
4- 9-6 Cluck, Wilcox O. & G. Co. 6.... 197
25- 9-6 Hull, Roxana Pet. Corp. 1 ..... dry
27- 9-6 Strothers, Phillips Pet. Co. 5 .... dry
36- 9-6 July, Gypsy Oil Co. 1 ..... dry
July, Gypsy Oil Co. 2 ..... dry
10- 8-6 Cumsey, Gypsy Oil Co. 1 617
Harjoche, Tidal Oil Co. 6 245
11- 8-6 Jones, Carter Oil Co. 1 2585
Lizzie, I. T. I. Oil Co. 2 336
13- 8-6 Grayson, Atlantic O. P. Co. 3.... 235
Fay, I. T. I. Oil Co. 6 1174
14- 8-6 Reed, Pure Oil Co. 15 15
Reed, Pure Oil Co. 19 288
15- 8-6 Goforth, I. T. I. Oil Co. 9 436
22- 8-6 Billington, I. T. I. Oil Co. 3....1120
23- 8-6 Bruden, Carter Oil Co. 4 480
Wise, Empire G. & F. Co. 4 255
35- 8-6 Dungan, Prod. & Ref. Corp. 1 ..3045
22- 8-8 Holwell, Magnolia Pet. Corp. 1. dry
5-10-8 Roberts, Sinclair O. & G. Co. 1. dry
3- 9-5 Edmundson, Empire G. & F. Co. 2 91
Edmundson, Empire G. & F. Co. 3 1640
10- 9-5 Bruner, Barnsdall Oil Co. 1 2983
Bruner, Independ. O. & G. Co. 2.1560
Bruner, Independ. O. & G. Co. 3.8850
Brown, The Texas Company 5... 100
12- 9-5 Hollins, Sinclair O. & G. Co. 3... 375
13- 9-5 Davis, Carter Oil Co. 1 920
3- 9-6 Strothers, Amerada Pet. Corp. 1.1466
25- 9-6 Fleet, I. T. I. O. Co. 1 38
Harjo, Tidal Oil Co. 2 795
27- 9-6 Lukes, Carter Oil Co. 7 ..... dry
10- 8-6 Cumsey, Gypsy Oil Co. 3 542
Cumsey, Sinclair O. & G. Co. 2.. 587
13- 8-6 Grayson, Gypsy Oil Co. 2 440
14- 8-6 Reed, The Texas Company 5 640
22- 8-6 Bowlegs, I. T. I. Oil Co. 7 65
23- 8-6 Wise, Carter Oil Co. 8 280
Wise, Carter Oil Co. 9 1845
35- 8-6 Pattey, Amerada Pet. Co. 1 1875
Nitey, Blackwell O. & G. Co. 5..4077
Pattey, Gypsy Oil Co. 1 2255
36- 8-6 Wadsworth, Mid-Continent Pet. Corp. 2 1940
28-10-7 Blevins, Continental Oil Co. 1.. dry
1- 9-5 Sango, Philmack Oil Co. 1 .... dry
10- 9-5 Bruner, Barnsdall Oil Co. 3 3643
Bruner, Gypsy Oil Co. 4 1845
11 9-5 B. Carter, Gypsy Oil Co. 8 767
M. Gaines, Independent & Margay 4 1100
Sparks, Magnolia Pet. Corp. 7....2224
12- 9-5 Hollins, Continental Oil Co. 4....4500
Seay, Magnolia Pet. Corp. 2 893
Barker, Twin State Oil Co. 4 2695
4- 9-6 Johnson, Amerada Pet. Co. 2 70
Davis, Carter Oil Co. 7 245
Cudjo, Gypsy Oil Co. 3 372
25- 9-6 Allen, I. T. I. Oil Co. 1 684
Allen, I. T. I. Oil Co. 2 182
26- 9-6 Jackson, Carter Oil & Gas Co. 1 1135
10- 8-6 Taylor, Sinclair Oil & Gas Co. 4 500
11- 8-6 Ellen, Sinclair Oil & Gas Co. 5. 275
13- 8-6 Grayson, Gypsy Oil Co. 4 920
Henderson, Gypsy Oil Co. 1 .... gas
Grayson, Tidal Oil Co. 2 1215
Grayson, Tidal Oil Co. 3 635
14- 8-6 Lacey, Empire G. & F. Co. 6 ... 230
17- 8-6 Strothers, Magnolia Pet. Corp. 1 dry
23- 8-6 Wise, Empire G. & F. Co. 3.... dry
35- 8-6 Wakkie, Gypsy Oil Co. 1 ..... dry
Dungan, I. T. I. Oil Co. 2 1130
36- 8-6 Campbell, Gypsy Oil Co. 1 1575
32- 8-8 Bagwell, Magnolia Pet. Corp. 3. 70
1- 7-6 Jackson, Tidal Oil Co. 1 1165
2- 7-6 House "B," I. T. I. Oil Co. 1 ...2275
1- 6-6 Harjo, T. B. Slick 1 ..... dry
20- 6-7 Dindy, Guy Swain 1 ..... dry
3- 9-6 Wilson, Prairie O. & G. Co. 1.. dry
23- 8-6 Gahagan, Prairie O. & G. Co. 4. 330
11- 8-6 Jones, Prairie O. & G. Co. 6 770
2- 7-6 House, Prairie O. & G. Co. 4 788
1- 7-6 Soketheche, I. T. I. Oil Co. 5 ..1379
33-11-8 Pierce, Continental Oil Co. 13.. 100
1- 9-5 Sango, Carter Oil Co. 2 1670
Sango, Red Bank Oil Co. 1..... dry
Clark, Shaffer O. & R. Co. 1 97
10- 9-5 Bruner, Barnsdall Oil Co. 2 825
Brown, The Texas Company 6.. 720
Wilmott, The Texas Company 5 607
Peters, Gypsy Oil Co. 7 780
11- 9-5 B. Carter, Gypsy Oil Co. 5..... dry

Sparks, Magnolia Pet. Corp. 8.. dry
12- 9-5 Sullivan, Magnolia Pet. Corp. 2.4146
Hollins, Continental Oil Co. 1...3000
12- 9-5 Anderson, Mid-Kans. Oil Co. 8.. 415
2- 9-6 Mandler, Carter Oil Co. 2 30
4- 9-6 Johnson, Amerada Pet. Corp. 1. dry
Davis, Carter Oil Co. 8 60
10- 8-6 Hammond, Magnolia Pet. Corp. 2 72
11- 8-6 Jones, Twin State Oil Co. 2..... 565
13- 8-6 Davis, I. T. I. Oil Co. 5 753
Fay, I. T. I. Oil Co. 3 1082
Fay, I. T. I. Oil Co. 4 1162
Fay, I. T. I. Oil Co. 5 683
16- 8-6 Taylor, Roxana Pet. Corp. 6 40
22- 8-6 Billington, I. T. I. Oil Co. 5 161
Bowlegs, I. T. I. Oil Co. 11 108
23- 8-6 Wise, Gypsy Oil Co. 3 47
35- 8-6 Nitey, Blackwell O. & G. Co. 8.. 700
Nitey, Blackwell O. & G. Co. 8 .1455
36- 8-6 Cosar, Continental Oil Co. 2 ...1450
36- 8-6 Wadsworth, Mid-Continent Pet. Corp. 7 1000
Jackson, I. T. I. Oil Co. 3 2411
2- 7-6 Davis, Barnsdall Oil Co. 1 ..... dry
Nitey, I. T. I. Oil Co. 4 ..... dry
Nitey, I. T. I. Oil Co. 8 1142
Davis, Philmack Oil & White Eagle O. & R. 1 840
11- 8-6 Jones, Prairie O. & G. Co. 1 ... dry
Jones, Prairie O. & G. Co. 2 dry
Jones, Prairie O. & G. Co. 4 .... dry
18- 8-6 Owen, Prairie O. & G. Co. 1 .... dry
2- 7-6 House, Prairie O. & G. Co. 2 3300

Wells completed 165
Production 154,699
Dry 30
Gas 1
Gas production 45,000,000

STEPHENS AND COTTON COUNTIES

24-1s-4w A. Franklin, Wirt Franklin 6.. 35
23-1 -9w Brown, Steven Linson et al 3.. 18
7-1s-8w Lane, Margay Oil Co. 5 10
34-1s-8w Simpson, Medlin et al 5 25
12-2s-8w Massey, Owen & Wood 5 ..... dry
13-2s-8w Dierkes, Beard & Cobb 1 ..... gas
34-2s-6w Fowler, Pearce & Brown 1 ... dry
13-1s-4w Green, Magnolia Pet. Corp. 1.. 15
2-1s-4w Goodman, McBride et al 1 ... dry
3-1 -5w Harrell, Magnolia Pet. Corp. 1 gas
31-1 -5w Payne, Magnolia Pet. Corp. 1.. 5
Creel, Magnolia Pet. Corp. 1 dry
13-2s-8w Massey, Owen & Wood 3 50
29-1s-9w Tarcy, Magnolia Pet. Corp. 2.. gas
29-1s-6w Gray, Winkler & McQueen 1... dry

Wells completed 15
Production 158
Dry 5
Gas 3
Gas production 20,000,000

TULSA COUNTY

10-16-12 Unallotted, Sheridan & Turner 1 gas
34-19-13 Vannest, Glidden Oil Corp. 2 .. gas
25-18-14 Island, Ellen O. & G. Co. 6 ... 30
27.19-11 Russell, Sheridan Oil Co. 3 ... gas
24-19-13 Vannest, Glidden Oil Corp. 3 .. gas
8-16-14 Scott, Savoy Oil Co. 1 25
Squire, Transcontinental Oil Co. 1 30

Wells completed 7
Production 85
Gas 4
Gas production 6,750,000

Miscellaneous Counties

Beckham County—
21-9-23w Hawkins, Bucy & Clay 1 ..... gas
Caddo County—
31-6-9w Gafney, English Drlg. Co. 2 ... 10
5-5-9w Parks, Rome Moran & Jackson 1 25
Comanche County—
24-2-10w Watson, Couch & Cherry 1 30
Cleveland County—
25-6-1e Byrd, Wiser Oil Co. 1 ..... dry
Craig County—
28-25-18 Bowlin, J. F. Reagan & Co. 13. 4
Haskell County—
24-8-20 Powell, San Bois Gas Co. 1 .... gas
Jefferson County—
4-6s-5w Gibson, Carter Oil Co. 1 ..... dry
Logan County—
32-19-3w Rogers, Carter Oil Co. 1 ..... dry
16-18-4w Gragg, Ramsey Bros. 1 ..... gas
Nowata County—
29-27-16 Wittock, Glass, Weaver & Witteck 4 15
7-26-16 Fee, Warner & Caldwell Oil Co. 1 3
Pawnee County—
10-22-4 Wineare, Magnolia Pet. Corp. 1. dry
9-22-6 Moore, Garber & Pulse 1 ..... dry
Pittsburg County—
22-7-17 Featherstone, Quinton Speiter Co. 1 ..... gas
Rogers County—
36-24-16 Strithart, J. H. Bushfield et al 1 3
20-24-16 Gillmore, Tidal Oil Co. 13 1
20-24-16 Gillmore, Tidal Oil Co. 14 1

Wells completed 18
Production 92
Dry 5
Gas 4
Gas production 16,000,000

CARTER COUNTY
Rigs

18-1s-3w Hardin, Humble O. & R. Co. 5.
19-1s-3w McCrany, Magnolia Pet. Corp. 2.
Wells Drilling
18-1s-3w N. Hardin, Magnolia Pet. Corp. 3.
20-1s-3w T. Hardin, Magnolia Pet. Corp. 1.
23-1s-3w Lewis, Magnolia Pet. Corp. 2.
Gaberial, Magnolia Pet. Corp. 1.
Anderson, Magnolia Pet. Corp. 1.
29-1s-3w Ratliff, Magnolia Pet. Corp. 2.
Ratliff, Humble O. & R. Co. 2.
30-1s-3w Akers, Magnolia Pet. Corp. 1.
33-1s-3w Choens, Magnolia Pet. Corp. 1
2-2s-3w Calvery, Schermerhorn et al 4.
11-2s-3w Lyles, Schermerhorn et al 2. 3.
21-2s-3w Morris, Magnolia Pet. Corp. 2.
6-2s-2w Higgins, Coline Oil Co. 6.
7-2s-2w Higgins, Coline Oil Co. 9.
16-2s-2w G. Cox, Magnolia Pet. Corp. 5.
26-2s-2w Harman, Magnolia Pet. Corp. 1.
33-4s-1w Simpson, Magnolia Pet. Corp. 1.
13-4s-2w Sarasota, Roxana Pet. Corp. 1.
32-4s-2e Miller, Magnolia Pet. Corp. 1.
Shut Down
19-1s-2w J. J. Hardin, Magnolia Pet. Corp. 8.
19-1s-2w Morris, McGahee 1.
21-2s-2w Morris, Skelly Oil Co. 1.
16-2s-2w May Cox, Magnolia Pet. Corp. 5.
2-5s-3w Frazier, Roxana Pet. Corp. 1.
Rigs, 2; wells drilling, 25; total, 27.

CREEK COUNTY
Rigs

36-15- 7 Strip, Bu-Vi-Bar Pet. 2.
1-17-10 Unallotted, Henry Oil Co. et al 2.
13-17-10 Thomas, Jackson & Wise 2.
13-17-10 Smiles, Ted Ray 2.
20-17-10 Wiley, F. C. Adams et al 1.
30-17-10 Sneed, Independent O. & G. Co. 2.
35-17-10 Bucktrot, Hiram O. & G. Co. 5.
9-17-11 Weaver, Nancy Bell Oil Co. 1-A.
16-17-11 Wilson, Thompson & Black 5.
6-17-12 Hengst, Andrews Drlg. Co. 1.
23-16-10 Rhea, Curtis Oil Co. et al 2.
35-16-10 Froe, Murta & Cole 1.
33-15- 9 Marshall, C. G. Tibbens 1.
29-14- 9 Abraham, The Texas Company 1.
17-14-10 Peters, Edgewood Oil Co. 2.
18-14-10 Wolfe, Independent O. & G. Co. 4.
18-14-10 Harjo, Prod. & Ref. Corp. 5.
Wells Drilling
6-15- 7 Hicks, Prairie O. & G. Co. 1.
13-19- 8 Ross, Gled Oil Co. 8.
29-19- 8 Taylor, The Texas Company 2.
9-18- 7 Long, Sinclair O. & G. Co. 2.
17-17- 7 Tiger, Gibson & Becker 2.
13-17- 8 Harjo, Olean Pet. Co. 2-A.
24-15- 7 Benified, Bu-Vi-Bar Pet. 1.
36-15- 7 Bigpond, Olean Pet. Co. 3.
3-15- 8 West, Bu-Vi-Bar Pet. 1.
10-15- 8 Miles, H. C. Wilson 1.
10-15- 8 Bruner, Skelly Oil Co. 1.
15-15- 8 Barnett, Twin State Oil Co. 1.
20-15- 8 Beaver, Gray Oil Co. et al 1-A.
30-14- 8 McGilbra, Olean Pet. Co. 5.
2-19- 9 Unallotted, Ed Lee et al 2.
7-19- 9 Tahkaney, Dixie Oil Co. 1.
31-18-10 Barnett, Madden & Madden 1.
35-18-10 Tate, Hemlock Oil Co. 1.
5-18-11 Eufaula, King et al 1-A.
22-18-11 Barnett, McCulloch Oil Co. 1.
23-18-11 Warren, Prod. & Ref. Corp. 2.
25-18-11 Narharkey, Cont. Oil Co. 1.
Tiger, Kennedy & Horner et al 3.
26-18-11 Unallotted, Cont. Oil Co. 1-A.
32-18-11 Miller, Drew O. & G. Co. 1.
4-18-12 Jackson, C. G. Tibbens 2.
12-17-10 Harris, Henry Avers et al 1.
13-17-10 Thomas, O. M. Irelan et al 1.
Strip, Kennedy & Horner 2.
Littlehead, Ted Ray 1.
22-17-10 Fulsom, The Texas Company 2.
24-17-10 Bucktrot, Pioneer Pet. Co. 14.
Tahkaney, J. H. Wright 24.
9-17-11 Jackson, Irelan et al 2.
27-17-11 Harris, Curtis Oil Co. 1-A.
21-16- 9 Hendrickson, Jackson & Wise 8.
2-16-11 Behen, Future Dev. Co. 1.
Strip, The Texas Co. 1.
Behen, Pioneer Pet. Co. 1.
An his, Twin State Oil Co. 2.
18-14-10 Wolfe, Independent O. & G. Co. 2, 3
Harjo, Prod. & Ref. Corp. 4.
Shut Down
35-19- 7 Jessie, H. U. Bartlett 13.
24-19- 8 Knight, Gled Oil Co. 3.
10-15- 8 Lewis, F. R. Billingslea et al 2.
2-14- 7 Abraham, Lima O. & G. Co. 1.
35-18- 9 Strip, Roach et al 1.
14-18-11 Tiger, O. N. White et al 1-A.
11-17- 9 Yarhola, Roxana Pet. Corp. 1.
33-17-12 Gilcrease, Prairie O. & G. Co. 2.
9-16-10 Shreffner, Sibble & O'Hare 1.
8-14-10 Kimball & Reading, W. H. Clark et al 1.
10-14-10 Ramsey, F. A. Havel et al 1-A.
Rigs, 17; wells drilling, 54; total, 71.

GARFIELD COUNTY
Rigs

30-23-3w Rhodes, Marland Oil Co. 1.
Wells Drilling
9-24-6w White, Pulse & Beamer 1.
14-24-3w Garsarsch, Sagar Oil Co. 1.
15-23-3w Barnes, Oil States Ref. Co. 1.
19-23-3w Wilcox, Amerada Pet. Corp. 1.
Wilcox, Skelly Oil Co. 1.
Whipple, Marland Oil Co. 1.
Garber, Marland Oil Co. 1, 2.
26-22-4w Frickenschmidt, Sinclair O. & G. Co. 12.
26-22-4w Doak, T. T. Eason et al 1.
18-22-3w Hartley, Sinclair O. & G. Co. 19.
12-21-4w Schriver, Beople et al 1.
2-20-5w Fee, Sinclair O. & G. Co. 1.
9-20-4w Looman, Marland Oil Co. 1.
Shut Down
3-22-5w Swinery, Ashby & Barr 1.
14-22-4w Dively, Chapel et al 4.
23-22-4w Smith, Reynolds 1.
26-22-4w Wells, Chas. Knox 1.
31-21-5w Vanderwork, A. E. Summers 1.
12-20-4w Miller, Marland Oil Co. 1.
Rigs, 1; wells drilling, 20; total, 21.

GRADY COUNTY
Rigs

1-4-8w Woods, Farley et al 1.
11-4-8w Williams, Magnolia Pet. Corp. 3.
14-4-6w McCosland, Garvin Drlg. Co. 1.
Wells Drilling
11-5-8w Lee Mohrett, Magnolia Pet. Corp. 1.
27-5-8w Chandler, Nicholos Drlg. Co. 4.
35-5-8w Dryden, Magnolia Pet. Corp. 3.
McCaughtry, Noble & Westerfelt 4.
Duke, Stogner et al 4.
36-5-8w Rogers, Watchorn O. & G. Co. 1.
16-5-7w Steeleman, John Graham 1.
3-4-8w Kayser, Rockstool et al 1.
10-4-8w Ramsey, Meridian Gas Co. 1.
Ramsey, Magnolia Pet. Corp. 1.
12-4-8w Woods, Watchorn O. & G. Co. 1.
13-4-8w Glover, The Texas Company 1.
14-4-8w Pettit, Twin State Oil Co. 3.
18-4-6w Homer, Garvin Drlg. Co. 1.
5-3-5w Hawkins, Carter Oil Co. 2.
7-3-5w Nash, Carter Oil Co. 2.
8-3-5w Ray Horton, Carter Oil Co. 1, 3.
16-3-5w Walford, Carter Oil Co. 3.
Smith, Hamon & Cox 2.
Burke, Marland Oil Co. 4.
17-3-5w Horton, Carter Oil Co. 5.
Woods, Marland Oil & Joe Ray 3.
21-3-5w Hicks, Amerada Pet. & W. H. Gant 7.
E. Herans, Carter Oil Co. 2.
22-3-5w Finch, Carter Oil Co. 2.
34-3-5w Nation, Hall & Briscoe 5.
Wham, Magnolia Pet. Corp. 1.
Scharmack, Carter Oil Co. 2, 3.
3-4-8w Dryden, Prairie O. & G. Co. 4.
Shut Down
13-9-5w Fulton, Remington 1.
13-7-5w Kemp, Bedman et al 1.
22-5-8w Tendell, Badgett & Hughes 1.
23-5-8w Farwell, Little Nich Oil Co. 1.
25-5-8w Spencer, Nicholos et al 1-A.
34-5-8w Schott, J. B. Nicholos 1.
35-5-8w Dryden, J. B. Nicholos 1.
7-5-7w Drake, Nicholos & Page 1.
8-3-5w Byrd, Carter Oil Co. 1.
27-3-5w Ponds, Amerada Pet. Corp. 1.
28-3-5w Wilde, Joe Anderson 1.
35-3-5w Cochran, Carter Oil Co. 1.
Rigs, 3; wells drilling, 43; total, 46.

GRANT COUNTY
Rigs

36-28-3w School land, Washoma & Roxana Pet. 1.
14-27-3w Howell, Argo Oil Co. 2.
Wells Drilling
22-27-3w Lane, Prairie O. & G. Co. 3.
35-28-3w Henn, Joe Lathrop et al 1.
Frantz, Marland Oil & Wagoner 1.
16-26-3w Sherrer, Markham & Flannagan 1.
22-25-4w Vallner, Cowden 2.
15-27-3w Swaggart, Argo Oil Co. 1.
Shut Down
6-28-3w Snyder, Ostot Dev. Co. 1.
18-27-5w Custard, J. W. Esiley et al 1.
23-27-3w Flood, Larutan Fuel Co. 1.
34-26-4w Royce, Sooner State Oil Co. 1.
Rigs, 2; wells drilling, 10; total, 12.

HUGHES COUNTY
Rigs

14-7-8 Jacobs, W. R. Ramsey 3.
Wells Drilling
17-10- 9 Hammer, Gilcrease Oil Co. 1.
16- 9- 9 Bruner, McCulloch Oil Co. 1.
17- 8-10 Cornelius, Dixie Oil Co. 3.
Bruner, I. T. I. Oil Co. 1.
18- 8-10 Irving, Independ. O. & G. Co. 5.
21- 7- 8 Street, Jarvis-Holmes 1.
8- 5- 8 Smith, Ramsey Bros. 1.
11- 5- 8 Stewart, T. P. Co. & G. Co. 1.
20- 8-10 Hampton, Prairie O. & G. Co. 3, 4.
Russell, Prairie O. & G. Co. 1.
Rigs, 1; wells drilling, 11; total, 12.

KAY COUNTY
Rigs

15-29-1w Henzel, Harris & Hahn 3.
31-28-1e Naylor, Greer et al 1.
5-27-1w Fox, Dewey & Hoffer 1.
28-27-1e Vikery, Hazel Atlas Glass Co. 2.
9-25-2w Chambers, Marland Oil Co. 4.
Wells Drilling
17-29-1e Brockhouser, Vernon O. & G. Co. 4, 6.
29-29-1e Swenson, Empire G. & F. Co. 1.
5-28-1w McCulloch, Comar Oil Co. 5.
30-28-1w Warren, Geo. Dickey 1.
18-28-1e Nix, Blackwell O. & G. Co. 11.
30-28-1e Lane, Greer et al 1.
8-27-1w Jameson, Harris & Hahn 1.
8-27-1w Kumler, Blackwell O. & G. Co. 5.
17-27-1w Jameson, Carter Oil Co. 3.
30-27-1w Woods, The Texas Company 1.
26-26-2w Williams, Palmer et al 1.
9-25-2w Chambers, Gypsy Oil Co. 2.
29-25-1w Smith, The Texas Company 1.
10-26-1e Anderson, Miller Bros. 1.
3-28-4 C. C. Stallings et al 1.
30-27-1w Pratt, Prairie O. & G. Co. 1.
Shut Down
21-29-1w Pribolh, Comar Oil Co. 2.
19-29-1e Piper, Vernon O. & G. Co. 1.
6-28-1e Wolfe, McComas et al 1.
34-26-2e McNeal, J. A. Vincent & National 1.
9-25-2w Chambers, Gypsy Oil Co. 3.
15-25-1w McDaniels, Tonkawa Dev. Co. 1.
Rigs, 5; wells drilling, 22; total, 28.

LOGAN COUNTY
Rigs

8-19-4w Musgrove, Champlin Ref. Co. 1.
16-18-4w Gragg, Marland Oil Co. 1.
34-18-4w Roberts, T. C. & O. Co. 1.
Wells Drilling
17-19-4w Freelove, Roxana Pet. Corp. 1.
18-19-4w Weber, Sinclair O. & G. Co. 1.
29-19-4w Stephens, Roxana Pet. Corp. 1.
Ross, Roxana Pet. Corp. 1.
30-19-4w Sebranek, Roxana Pet. Corp. 1.
31-19-4w Williams, L. H. Wentz 1.
32-19-4w Williams, Roxana Pet. Corp. 1.
33-19-4w ——, Bryan & Emery 1.
27-18-4w Jewell, T. P. C. & O. Co. 1.
28-18-4w Knecht, Sinclair O. & G. Co. 1.
33-18-4w Smith, Ramsey Bros. 1.
Moore, Prairie O. & G. Co. 1.
33-18-3w Quier, Haley & Pioneer Pet. Co. 1.
12-15-1w Kirkpatrick, Bu-Vi-Bar Pet. Co. 1.
Shut Down
9-18-4w Lovell, Brown & Blevens 1.
11-18-4w Hall, Welch, Acton & Brown 1.
28-18-4w Sode, Blackwell O. & G. Co. 1.
33-18-4w Speaks, T. P. C. & O. Co. 1.
20-17-1e Signs, T. B. Slick 1.
28-17-1e Berry, T. B. Slick 1.
28-16-1w Lair, Blackford O. & G. Co. 1.
Rigs, 3; wells drilling, 21; total, 24.

MUSKOGEE AND WAGONER COUNTIES
Rigs

21-17-15 Dan, Shaffer O. & R. Co. 1.
34-15-18 Manuel, J. B. Buell 1-A.
36-15-18 Deer, C. S. Hully 2.
Wells Drilling
10-17-16 Hawkins, Knox & Shouse 1.
8-15-16 Barnett, Philip Doyle 3.
28-15-15 Sango, Hillside O. & G. Co. 9.
32-15-15 Austin, Link Oil Co. 2.
30-15-16 Woodall, Ernes. Price 2.
28-15-17 Taylor, J. M. Foltz 1.
20-15-18 McIntosh, A. A. Lang 1.
19-14-16 Reed, Vogler & Lightner 2.
5-14-19 Hicks, Sunray Oil Co. 1.
6-14-19 Timberlake, J. W. Hale et al 2.
7-14-19 Reed, C. M. Bradley 1.
Coff, J. Henigman et al 2.
Kell, J. W. Hale 1.
4-13-19 Carver, W. R. Sommerville 1.
Shut Down
31-18-17 Hosmer, H. D. McCacken 4.
Hosmer, A. Chapman 1.
22-18-17 Childers, Boldridge et al 1.
19-18-18 Colbert, A. Chapman 2.
20-17-18 Cane, J. H. Cuba 4.
21-15-15 Serrell, C. A. Livelace et al 1.
30-15-15 Townsend, Vise & Heflin 2.
12-15-18 Jobe, C. F. Finefield 1.
34-14-17 Smith, J. L. Slusher 1.
6-14-19 Crittenden, C. B. Crittenden 1.
34-13-17 McKee, Elk Drlg. Co. 1.
Rigs, 3; wells drilling, 25; total, 28.

OKFUSKEE COUNTY
Rigs

28-12-10 Johnson, Sands Pet. Co. 1.
33-12-11 McCoy, Josey Oil Co. 13, 16, 20, 21.
35-11- 9 Wind, Gilcrease Oil Co. 2.
14-11-10 Brooks, Terrian et al 1.
23-11-11 Unallo ted, Carter Oil Co. et al 2.
24-11-11 Barnett, E. L. Robinson et al 13.
Wells Drilling
21-13- 9 Self, Barnsdall Oil Co. 1.
8-12-10 Yarhola, Blakely et al 1.
33-12-11 Fields, Josey Oil Co. 3.
30-11-10 Grayson, Empire G. & F. Co. 1.
13-11-11 Barnett, E. W. Kimberly 1.
14-11-11 Ingram, Champlin O. & R. Co. 2.
15-11-11 Jacobs, Champlin O. & R. Co. 7.
19-11-11 Barnett, Riverland Oil Co. 1.
30-11-11 Holmes, Minnehoma Oil Co. 2.
Holmes, Riverland Oil Co. 2.
35-11-11 Tiger, W. L. Umborn 1.
17-10- 9 Strain, Prairie O. & G. Co. 1.
30-11-11 Holmes, Independ. O. & G. Co. 1.
Shut Down
24-12- 8 Knight, Transcontinental Oil Co. 1.
33-12-11 McCoy, Josey Oil Co. 12, 18, 19.
Rigs, 9; wells drilling, 21; to al, 30.
4-11-10 Stidham, Moose & Daniels 1.
11-11-11 Hopwood, Ted Savoie et al 1-A.
5-10-10 Davis, Rogers & Wilson 1.
3-10-11 Scott, W. L. Umburn 2.

OKMULGEE COUNTY
Rigs

19-16-14 Grayson, Savoy Oil Co. 3.
2-15-12 George, Campbell & Beams 1.
12-14-12 Warren, A. C. Saint et al 1-A.
19-13-11 Phillips, G. Colvin et al 1.
15-13-12 Skelton, Sheldon Oil Co. et al 2.
9-12-12 Milliken, Kessler & Logan 4.
4-11-12 Hawkins, Weir 3.
7-11-12 Holmes, Moffett et al 5.
32-11-12 Ashbury, Colorado O. & G. Co. 2.
9-14-14 Love, Riney & Williams 2.
1-13-13 Curus, W. B. Pine 1-A.
13-11-13 Kanard, B. Morgan 10.
Wells Drilling
36-16-13 Ackley, Dewitt Baldridge Oil Co. 1-A.
16-15-11 Belisle, G. T. Roberts 4.
24-15-11 Soule, Anadarko Western Oil Co. 1
17-15-12 Long, J. J. Lee & Son 1.
1-14-12 Perryman, Jordan & Thompson 1
32-13-11 Thomas, Denver P. & R. Co. 11.
5-12-12 Bird, Eagle Picher Lead Co. 1.
7-12-12 Wilson, Independ. O. & G. Co. 4.
8-12-12 Bird, Morgan 1.
6-11-12 Hawkins, Moffett et al 7.
18-16-13 Long, Kirkland & Son 2.
9-15-14 Wars, Carr Peterson 3.
10-15-14 Skidmore, W. B. Pine 2.
16-15-14 McKinney, Denton & Marshall 1-A
6-14-13 Doyle, Hu chinson & Becker 4.
7-14-13 Lacey, Sperry & Son 6.
16-14-14 Colbert, Sharpe & Fillinger 4.
23-14-14 Thomas, J. L. Powell 4.
18-14-15 Rentie, Church et al 1-A.
33-13-13 Jones, A. G. Hazlett 4.
32-13-14 Simmer, A. Shelton 2.
19-12-13 Burgess, Midland Oil Co. 2.
13-11-13 Kanard, B. Morgan 9.
27-11-13 Thompson, G. N. Buzzard et al 1.
Shut Down
20-16-12 Fee, Crider 1.
20-16-14 Mayfield, X. K. Stout 3.
23-15-11 Bruner, Le Beane et al 2.
17-11-12 Summers, F. Smith 1-A.
9-15-13 Hawkins, Transcontinental Oil Co 2.
20-15-14 Rowe, A. W. Cline 1-A.
27-14-15 Smith, Apex Pet. Co. 1.
11-13-13 Gaither, Carey Jenninga 4.
28-13-14 Doyle, Trout Drlg. Co. 3.
5-11-13 Grayson, Moffi t et al 1.
Rigs, 12; wells drilling, 34; total, 46.

OSAGE COUNTY
Rigs

1-28-10 M. M. Lefever 14.
7-27- 6 Phillips Pet. Co. 2.
11-26- 6 Geo. Parker 4.
13-26- 8 Stephenson, Henry & Rock 1.
21-25- 6 Sinclair O. & G. Co. 3.
22-25- 7 Geo. Parker 1.
26-25- 9 Peters Pet. Co. 2.
27-25- 9 Marland Oil Co. 3.
Sam Sitrin 14.
7-24- 8 Galt Brown Oil Co. 1.
23-22-10 Elm Oil Co. 15.
32-21-10 Devonian Oil Co. 2.
Wells Drilling
17-29-11 Winona Oil Co. 2.
26-29-11 Kewanee O. & G. Co. 1.
31-29-12 Simons et al 4.
20-27- 6 A. G. Gilphant et al 3.
28-27- 6 Gypsy Oil Co. 7.
34-27- 6 Kewanee O. & G. Co. 6, 9, 10.
27-27-10 I. T. I. Oil Co. 100.
5-27-11 Osage Gas Prod. Co. 381
17-27-11 I. T. I. Oil Co. 380.
21-27-11 I. T. I. Oil Co. 376.
3-26- 6 Kewanee O. & G. Co. 2.
11-26- 6 Geo. Parker 2.
25-26-11 I. T. I. Oil Co. 51.
29-29-11 I. T. I. Oil Co. 378.
10-25-10 I. T. I. Oil Co. 375.
11-24-11 Geo. Tsetos 3.
34-23- 9 M. & T. Oil Co. 4.
6-21- 9 A. D. McConnell 1.
6-21-12 Okla. Natl. Gas Corp. 775.
Shut Down
24-27- 6 Kewanee O. & G. Co. 7.
Kewanee O. & G. Co. 5, 6.
Kewanee O. & G. Co. 4, 5, 6, 7.
7-23-10 Sheeders O. & G. Co. 1.
30-21-10 Sand Springs Home Oil 108.
6-21-12 Kewanee O. & G. Co. 3.
1-20-10 Sand Springs Home 107.
19-23- 7 Daniels, Prairie O. & G. Co. 1.
34-25- 9 Marland Oil Co. 2.
Rigs, 12; wells drilling, 34; total, 46.

PAYNE AND LINCOLN COUNTIES
Rigs

6-16-5 Lindsey, I. T. I. Oil Co. 2.
10-15-5 Jacobs, Magnolia Pet. Corp. 1.
Wells Drilling
15-19-5 ——, Fern O. & G. Co. et al 1.
33-19-5 Eagle, Wood Oil Co. 1.
8-18-4 Douglas "B," Twin State Oil Co. 1.
4-18-5 ——, Shaffer O. & R. Co. 1.
10-18-5 Strip, T. J. Hughes 1.
33-17-4 Ward, Empire G. & F. Co. 3-A.
31-17-5 Bett, T. P. C. & O. Co. 1.
Skinner, Shaffer O. & R. Co. 1-A, 2.
5-16-5 Dahlke, P. T. C. & O. Co. 1.
8-14-4 Gillian, Magnolia Pet. Corp. 2.
12-18-4 McDaniel, Producers & Ref. Corp. 1.
Shut Down
32-18-3 Widow, Garber, Pulse & Gloyd 1.
20-17-3 Gunn, Willis O. & G. Co. 1.
36-16-5 School land, Magnolia Pet. Corp. 1.
7-14-4 Telford, Magnolia Pet. Corp. 1.
15-13-4 School land, Bu-Vi-Bar Pet. Co. 1.
Rigs, 2; wells drilling, 17; total, 19.

PAWNEE COUNTY
Rigs

15-20-6 Coots, Magnolia Pet. Corp. 1.
29-20-9 Smelser, Turner & al 1.
Wells Drilling
33-23-3 Miller, Watchorn O. & G. Co. 4.
9-22-3 Arkeketa, Watchorn O. & G. Co. 1.
8-21-6 Barber, Dixie Oil Co. 1.
16-21-6 School land, F. R. Billingslea & 101 Ranch Oil 2.
16-21-7 Wells, R. Feeman 1-A.
20-21-7 Scott, Superior Oil Co. 1-A.
3-20-6 Garner, Privett Drlg. Co. 2.
10-20-6 Kline, Privett Drlg. Co. 2.
Shut Down
22-20-9 Hemming, T. E. Mann et al 1-A.
Rigs, 2; wells drilling, 9; total, 11.

PONTOTOC AND GARVIN COUNTIES
Rigs

17-5-3 Milner, Homaokla Oil Co. 3.

Harjo, Louisiana O. R. Co. 4.
Porker, W. R. Ramsey 2.
McElroy, W. R. Ramsey 2.
19-5-8 Wode, Max Westheimer 1.
20-5-8 Patterson, W. R. Ramsey 1-A.
9-4-6 Balcrop, American O. & R. Co. 6.
31-1-3w Burr, Magnolia Pet. Corp. 2.

Wells Drilling

28-5-5 Copeland, La Salle et al 2.
29-5-5 Lewis, Jolly-Ogg Oil Co. 1.
21-5-6 Cox, Conservative O. & G. Co. 1.
27-5-6 Daniels, American O. & R. Co. 1.
Miller, American O. & R. Co. 1.
28-5-6 Brown, Conservative O. & G. Co. 1.
Norris, Conservative O. & G. Co. 1.
34-5-6 Wray, American O. & R. Co. 4.
36-5-7 Gilcrease, Shaffer O. & R. Co. 1.
17-5-8 Milner, Homaokla Oil Co. 2.
Milner, Homaokla Oil Co. 1, 4.
McElroy, Louisiana O. R. Co. 2.
Parker, W. R. Ramsey 1.
McElroy, W. R. Ramsey 1.
Milner, W. R. Ramsey 2-A.
19-5-8 Hutcheson, T. P. C. & O. Coo. 1.
20-5-8 Perry, Louisiana O. R. Co. 4, 5.
Warfle, Louisiana O. & R. Co. 3.
Webb, W. R. Ramsey 2, 3.
Shields, Whitney e. al 1.
21-5-8 Shipley, W. R. Ramsey 1.
29-5-8 Patterson, W. R. Ramsey 1-B.
Smith, Jack Kilgore 1.
30-5-8 Butler, W. R. Ramsey 1-B.
15-4-1e Perkins, Dixie Oil Co. 1.
10-4-3e Strickland, Garland Oil Co. 1.
10-4-6 Sales, American O. & R. Co. 1-A.
13-4-6 Wright, American O. & R. Co. 1.
35-4-6 Rayborn, Bowles et al 1.
12-3-1e Vaughn, Magnolia Pet. Corp. 1.
31-1-3w King, Magnolia Pet. Corp. 1.

Shut Down

12-5-4 Fleming, Gillespie et al 1.
25-5-6 Patterson, Gillette & Krueger 1.
27-5-6 Miller, T. P. C. & O. Co. 1.
15-5-8 Gilmer, Snowden & McSweeney 1.
16-5-8 Yoakum, Shaffer O. & R. Co. 3.
17-5-8 Rose, Winkler & McQueen 1.
14-4-7 Johnson, Henry et al 1.
Rigs, 8; wells drilling, 41; total, 49.

POTTAWATOMIE COUNTY

Rigs

19-7-4 Spangy, Twin State Oil 4.
30-7-4 Davis, Pierce Oil Corp. et al 3.
18-7-5 Hembree, Prairie O. & G. Co. 1.
25-7-3 Bledsoe, Prairie O. & G. Co. 1.

Wells Drilling

22-11-2e Hollins, Wilcox O. & G. Co. 1.
32-11-2e Pickard, Wilcox O. & G. 1.
28-10- 4 Toney, Central Natl. Oil Co. 1.
16-10- 5 School land, Clark Edwards et al 1.
2- 9-2e Scott, McCulloch Oil Co. 1.
27- 9- 4 Hamblin, W. B. Pine 1.
4- 9- 5 Cowden, Amerada Pet. Corp. 3, 8.
Cowden, Magnolia Pet. 4, 5, 6.
5- 9- 5 Butts, Independent O. & G. 1.
Roger, The Texas Company 2, 3, 4, 5.
8- 9- 5 Knapp, Independent and Darby 7.
9- 9- 5 Gibson, Barnsdall Oil Co. 7, 8.
Bryant, Magnolia Pet. 5, 6.
Watkins, Tidal Oil 4, 5, 7.
32- 9- 5 Harber, Independent O. & G. 1.
24- 8-2e Jones, Superior Oil Co. 1.
13- 7-3e Wilson, Magnolia Pet. 1.
22- 7-3e Rickers, Roxana Pet. 1.
25- 7-3e Harper, Magnolia Pet. 1.
36- 7-3e School land, Magnolia Pet. 1.
School land No. 76, Magnolia Pet. 1.
School land, Magnolia Pet. 1.
10- 7- 4 Duff, Atlantic, Independent and Darby 1.
11- 7- 4 Billington, Magnolia Pet. 2.
13- 7- 4 Vieux, Magnolia Pet. 1.
14- 7- 4 Standridge, Independent and Darby 2.
Hamby, Independent, Darby and Gypsy 1.
15- 7- 4 Robbins, Magnolia Pet. 1.
P. Robbins, Magnolia Pet. 1.
19- 7- 4 Doyle, Continental Oil Co. 3.
Talley, Magnolia Pet. 2.
Doyle, Mid-Cont. Pet. Corp. 7.
20- 7- 4 Thompson, C. J. Wrightsman 1.
22- 7- 4 Shaw, Darby Pet. Co. 1.
23- 7- 4 McGee, Gypsy Oil Co. 1.
LeClair, Independent and Darby 1.
24- 7- 4 Davis, Magnolia Pet. 1.
Cloude, Superior Oil Co. 1.
30- 7- 4 Davis, Pierce Oil Corp. et al 4.
Doyle, Pure Oil Co. 5.
7- 7- 4 Bowers, Sinclair O. & G. 1.
19- 7- 5 Harper, Magnolia Pet. 1.

Shut Down

12-10-3e Ives, Sikes, Kilgore & Shaffer 1.
9- 9- 5 Watkins, Tidal Oil Co. 8.
16- 9- 5 Day, Pure Oil Co. 1.
16- 8- 5 School land, I. T. I. Oil Co. 1.
30- 7- 4 Ward, Pierce Oil Corp. 1.
10- 6-2e McCahey, Davis & Detrick et al 1.
Rigs, 4; wells drilling, 58; total, 62.

SEMINOLE COUNTY

Rigs

10- 9- 5 Pack, Barnsdall Oil Co. 3.
24- 9- 5 Gross, Amerada Pet. Co. 1.
Stidham, Gypsy Oil Co. 1.
25- 9- 5 Harris, Empire G. & F. Co. 1.
7- 9- 8 Hill, Independent and Amerada 2.
8- 8- 6 Micco, Carter Oil Co. 1.
9- 8- 6 Jones, Atlantic O. P. Co. 3, 4.
10- 8- 6 Cumsey, Sinclair O. & G. Co. 4.
11- 8- 6 Dees, Carter Oil Co. 2.
13- 8- 6 Fay, I. T. I. Oil Co. 7, 8.
14- 8- 6 Reed, The Texas Company 14.
21- 8- 6 Coker, Independent and Marland 2, 3.
25- 8- 6 Fore, I. T. I. Oil Co. and Phillips Pet. 2.
Pattey, W. B. Pine and Phillips Pet. 1, 2, 3.
26- 8- 6 Fish, Carter Oil Co. 4.
Phoebe "A", I. T. I. Oil Co. 3.
31- 8- 7 Dixon, Magnolia Pet. 1.
1- 7- 6 Sokethehe, I. T. I. Oil Co. 7.
2- 7- 6 Davis, Barnsdall Oil Co. 2.
Nitey, I. T. I. Oil Co. 10, 11.
5- 7- 6 Walker, Twin State Oil Co. 1.
7- 7- 6 Palmer, Simon & Beam 1.

Wells Drilling

32-11- 8 Pierce, Continental Oil Co. 1.
26-10- 5 Turner, Sorry & Swartz 1.
33-10- 6 Saloche, Mid-Cont. Pet. Corp. 3.
34-10- 6 Harjoche, Empire G. & F. Co. 1.
21-10- 7 Solomon, Gypsy Oil Co. 1.
15-10- 8 Epply, Snowden & McSweeney 1.
1- 9- 5 Ingram, Barnsdall Oil Co. 2, 3, 4, 5, 6, 7.
Sango, Barnsdall Oil Co. 2, 3.
Sango, Carter Oil Co. 3.
Sango, Gypsy Oil Co. 1, 2, 4.
Clark, Shaffer O. & R. Co. 2, 3, 4, 5, 6, 7.
2- 9- 5 Bruner, Barnsdall Oil Co. 2.
Kays, Continental Oil and Darby Pet. 1, 2, 3.
Sango, Sinclair O. & G. Co. 1.
Anderson, The Texas Company 1, 2, 3, 4, 5, 6, 7.
Hearn, Twin State Oil Co. 2, 3.
3- 9- 5 Rogers, Amerada Pet. Corp. 3, 4.
Edmundson, Empire G. & F. 4, 5.
Edmundson, Magnolia Pet. 2, 4.
10- 9- 5 Brown, Barnsdall Oil Co. 2.
Bruner, Barnsdall Oil Co. 4.
Sullivan-Harjo, Barnsdall Oil 3.
Peters, Gypsy Oil Co. 5.
Sullivan, Independent O. & G. 5.
Brown, The Texas Company 7, 8.
Wilmott, The Texas Company 1, 2, 6, 8.
11- 9- 5 Davis, Barnsdall Oil Co. 3.
J. Davis, Barnsdall Oil Co. 3, 4.
B. Carter, Gypsy Oil Co. 4, 9, 10, 11, 12.
M. Gaines, Independent and Margay 2, 3.
Holmsley, Magnolia Pet. 2, 7, 8.
Sidham "A", Prairie O. & G. Co. 8, 11, 13.
Sidham "B", Prairie O. & G. 10.
12- 9- 5 Wasutke, Barnsdall Oil Co. 4.
Payne, Carter Oil Co. 4.
Barker, Empire G. & F. Co. 2.
Noble, Gypsy Oil Co. 4.
Dixon, Magnolia Pet. 3, 4.
Seay, Magnolia Pet. 6, 7, 8, 9, 10.
Sullivan, Magnolia Pet. 1, 3, 4.
Hollins, Sinclair O. & G. 4.
Barker, Twin State Oil 2, 3, 5, 6.
3- 9- 5 C. Graham, Prairie O. & G. Co. 2, 4, 5, 6.
17-10- 6 Bruner, Prairie O. & G. Co. 1.
14- 9- 5 Anderson, Mid-Kansas Oil 2, 4.
15- 9- 5 Anderson, Amerada Pet. Corp. 5.
34- 9- 5 Lowery, Empire G. & F. Co. 1.
13- 9- 5 Davis, Prairie O. & G. Co. 4.
18- 9- 7 Stubbs, Prairie O. & G. Co. 1.
3- 9- 6 Strothers, Amerada Pet. Corp. 2.
Frazier, Carter Oil Co. 7.
Johnson, Carter Oil Co. 1.
Aldridge, Pure Oil Co. 6.
Strothers, Roxana Pet. 2, 3, 4.
Polly, Sinclair O. & G. Co. 4.
4- 9- 6 Davis, Carter Oil Co. 5.
Cudjo, Gypsy Oil Co. 4.
Lula, W. B. Pine 1.
Varnum, Superior Oil Co. 1.
Osborn, The Texas Company 1.
Jeming, Twin State Oil Co. 2, 3.
Cluck, Wilcox O. & G. Co. 7, 8.
25- 9- 6 Gross, Empire G. & F. Co. 3, 4.
Harjo, Independent O. & G. Co. 4.
Wilkins, Mid-Kansas Oil Co. 2.
Harjo, Tidal Oil Co. 3.
26- 9- 6 Bowlegs, I. T. I. Oil Co. 6.
27- 9- 6 Townsite, Smith et al 1.
35- 9- 6 Butler, Gypsy Oil Co. 4.
36- 9- 6 Stephens, Magnolia Pet. 1.
Strothers "B," Pure Oil Co. 4, 8.
3- 9- 8 Butler, Empire G. & F. Co. 1.
7- 9- 8 Cobb, Independent O. & G. 2.
7- 9- 8 Cully, Mid-Cont. Pet. Corp. 3.
10- 9- 8 Butner, Jarvis-Holmes 1.
14- 8- 5 Fife, Barnsdall Oil Co. 1.
3- 8- 6 Jacksey, Sinclair O. & G. Co. 1.
7- 8- 6 Dosen, Gypsy Oil Co. 1.
8- 8- 6 Lawson, Amerada Pet. Corp. 1.
9- 8- 6 Bradley, Amerada Pet. Corp. 1.
Jones, Atlantic O. P. Co. 2.
Melisa, Carter Oil Co. 1.
Bradley, Gypsy Oil Co. 1.
Graham, Magnolia Pet. 1.
Jones, Sinclair O. & G. Co. 5, 6, 7.
10- 8- 6 Harjoche, Gypsy Oil Co. 1.
Hammond, Magnolia Pet. 1.
Strothers, Pure Oil Co. 2, 3.
Cumsey, Sinclair O. & G. Co. 3.
Harjoche, Tidal Oil Co. 3, 5, 7.
11- 8- 6 Dees, Carter Oil Co. 1.
10- 8- 6 Harber, Prairie O. & G. Co. 8.
11- 8- 6 Jones, Carter Oil Co. 2, 3.
Jones, Gypsy Oil Co. 1.
Cordell, Magnolia Pet. 1.
Strothers "D," Pure Oil Co. 4, 5.
Ellen, Sinclair O. & G. 3, 6, 7.
12- 8- 6 Smith, Devonian Oil Co. 1.
Rhodes, Magnolia Pet. 1, 2.
Smith, Mid-Cont. Pet. Corp. 1, 2, 3, 4, 5.
13- 8- 6 Grayson, Atlantic O. P. Co. 2, 4.
Grayson, Gypsy Oil Co. 3.
Davis, I. T. I. Oil Co. 3.
Fay, I. T. I. Oil Co. 1.
Davis, Magnolia Pet. 2.
Davis, Magnolia Pet. 1.
14- 8- 6 Harjoche, Carter Oil 3.
Lacey, Empire G. & F. 3, 8.
Reed, The Texas Company 12, 13, 15.
15- 8- 6 Bowlegs, Carter Oil Co. 3.
Walker, Carter Oil Co. 2, 4.
Goforth, I. T. I. Oil 6, 8.
16- 8- 6 Taylor, Roxana Pet. Corp. 7.
21- 8- 6 McClesy, Carter Oil Co. 1.
Coker, Independent and Marland 4.
22- 8- 6 Billington, I. T. I. Oil Co. 4.
Bowlegs, I. T. I. Oil Co. 1.
23- 8- 6 Burden, Carter Oil Co. 1, 2, 3.
Hilly, Carter Oil Co. 2.
Burden, I. T. I. Oil Co. 1.
24- 8- 6 Work, I. T. I. Oil Co. 2.
26- 8- 6 Hulis, I. T. I. Oil Co. 2.
35- 8- 6 Pattey, Amerada Pet. Corp. 2, 3.
Nitey, Blackwell O. & G. 4, 7.
Nitey, Gypsy Oil Co. 2, 3.
Dungan, I. T. I. Oil Co. 3, 4.
Fore, I. T. I. Oil and Phillips Pet. 1.
Pattey, Magnolia Pet. 1, 2, 3, 4.
Dungan, Prod. & Refs. Corp. 2, 3.
Hull, Pure Oil Co. 1, 2.
36- 8- 6 Fish, Carter Oil 1, 2, 3, 5, 6, 7.
Cosar, Continental Oil Co. 1.
Campbell, Gypsy Oil Co. 2.
Phoebe "A," I. T. I. Oil Co. 1, 2.
Phoebe "B," I. T. I. Oil 1, 2, 3, 4.
Wadsworth, Mid-Cont. Pet. Corp. 4, 5, 6, 8.
Cosar, Sinclair O. & G. Co. 1.
Marcome, Shaffer O. & R. Co. 1.
34- 8- 6 Aldridge "A," Prairie O. & G. Co. 1, 2.
12- 8- 6 Templeton, Prairie O. & G. 2, 3, 4.
11- 8- 6 Jones, Prairie O. & G. Co. 7.
22- 8- 8 Drake, Phillips Pet. Co. 1.
29- 8- 8 Walker, Independent O. & G. 2.
31- 8- 8 Casey, Carter Oil Co. 10.
31- 8- 8 Frans, Magnolia Pet. 6.
Jones, Magnolia Pet. 7.
B. Lena, Magnolia Pet. 6.
1- 7- 6 Monger, Gypsy Oil Co. 1.
Camp, I. T. I. Oil Co. 1.
Jackson, I. T. I. Oil Co. 2.
McCulla, I. T. I. Oil Co. 1, 3, 8.
Sokethehe, I. T. I. Oil Co. 1, 2, 3, 4, 6.
Gosey, Magnolia Pet. 1.
Alex, Philmack Oil Co. 1.
Smith, Roxana Pet. Corp. 1.
Coker, The Texas Company 1, 2, 3.
House, Tidal Oil Co. 2, 3.
2- 7- 6 Nitey, Amerada Pet. 1, 2, 3, 4.
House "B," I. T. I. Oil Co. 2, 3.
Nitey, I. T. I. Oil Co. 3, 5, 6, 7, 9, 12.
Alexander, Phillips Pet. et al 1.
Cruse, Magnolia Pet. 1.
House, Prairie O. & G. Co. 1, 3.
11- 7- 6 Jackson, Carter Oil Co. 1.
13- 7- 6 Tiger, Snowden & McSweeney 1.
23- 7- 6 Hotulka, Independent O. & G. 1.
27- 7- 6 Manuel, Mid-Cont. Pet. Corp. 1.
5- 7- 7 Smith, Mid-Cont. Pet. Corp. 1.
32- 7- 7 Marshall, I. T. I. Oil Co. 1.
1- 6- 6 Moore, T. B. Slick 1.
5- 6- 7 Vierson, Magnolia Pet. 1.
18- 6- 8 Phillips, Carter Oil Co. 1.
18- 5- 8 Reed, Louisiana O. R. Corp. 1.

Shut Down

1- 9- 5 Sango, Gypsy Oil Co. 3.
Sango, Fearight 1.
3- 9- 5 Rogers, Amerada Pet. Corp. 5.
10- 9- 5 Brown, The Texas Company 4.
24- 9- 5 Baker, Prairie O. & G. Co. 2.
25- 9- 6 Gross, Empire G. & F. Co. 5.
26- 9- 6 Fixico, Tidal Oil Co. 8.
36- 9- 6 Strothers "B," Pure Oil Co. 7.
15- 9- 7 Jonah, Pure Oil Co. 1.
3- 8- 6 Chupco, Phillips Pet. Co. 1.
5- 8- 6 Seminole, Gypsy Oil Co. 1.
11- 8- 6 Strothers "D," Pure Oil Co. 7.
14- 8- 6 Harjoche, Carter Oil Co. 3.
Strothers "D," Pure Oil Co. 8.
15- 8- 6 Bowlegs, Minnehoma Oil Co. 4.
22- 8- 6 Bowlegs, Prairie O. & G. Co. 1.
11- 8- 6 Jones, Prairie O. & G. Co. 5.
15- 8- 8 Sewell, J. E. Crosble 2.
Davis, Independent O. & G. Co. 1.
Sewell, Independent, Champlin & Bass 2.
1- 7- 6 Wadsworth, Gypsy Oil Co. 1.
2- 7- 6 Hyde, Twin State Oil Co. 1, 2.
22- 7- 6 Hotulka, Barnsdall Oil Co. 1.
Rigs, 28; wells drilling, 322; total, 350.

STEPHENS AND COTTON COUNTIES

Rigs

1- 1-9w Ball, Jeffreys et al 1.
29-1s-8w Blaydes, Clarkson & Smith 2.
34-2s-6w Prentiss, Pearce & Brown 1.
13-1s-4w Martin, Magnolia Pet. 1.
Shields, Shermerhorn et al 1.

Wells Drilling

31- 1-8w Brymer, Smith-Law 5.
32- 1-8w Morgan, Magnolia Pet. 4.
2- 1-5w Payne, Magnolia Pet. 1.
19-1s-9w Darrance, Hurley et al 1-A.
15-1s-8w Howey, Magnolia Pet. 1-A.
27-1s-8w Taliaferro, Harry Hanbury 5.
Cummings, McAlester et al 2.
29-1s-8w Blaydes, Clarkson & Smith 1.
34-1s-8w Simpson, McAllester & Ward 1.
8-1s-5w Parker, Magnolia Pet. 1.
12-2s-8w Massey, Owen & Wood 4.
11-3s-6w Florence, Dameron et al 1.
10-3s-5w Edwards, Touhy et al 1.
18- 1-4w Chrisholm, Magnolia Pet. 1-A.
12-1s-4w Brittain, Cameron Ref. Co. 2.
13-1s-4w Bell, Magnolia Pet. 1.
15-1s-4w Aldridge, Magnolia Pet. 1.
25-1s-4w Peddycord, C. R. Smith 1.
6- 1-4w Gray, Prairie O. & G. Co. 1.

Shut Down

15-1s-5w March, Madge Oil Co. 1.
22-2s-11w Koehler, J. W. Ray 1.
24-1s-4w Inscore, Gilmer Oil Co. 1.
Rigs, 5; wells drilling, 22; total, 27.

TULSA COUNTY

Rigs

9-16-12 Penoke, Turner & Turner 5.

Wells Drilling

18-19-10 Bemore, Holmes et al 2.
4-19-11 Gates, Sand Springs Home 2.
15-19-11 Jones, Lockwood et al 1.
33-19-11 Hodge, Anadarko Western Oil 1.
10-18-12 Cohwoe, Munn Bros. 2.
5-17-13 Smith, Suppes 4.
20-17-13 Berryhill, Enfisco Oil Corp. 1.
32-17-14 Billip, L. C. Butler 2.
3-16-12 Sanderson, S. W. Anthony 8.
15-16-12 Johnstone, J. Crider et al 1.

Shut Down

24-19-10 Ragen, Holmes et al 1.
1-17-13 Taylor, E. A. Hawley 1.
3-15-12 Sanderson, S. W. Anthony 7.
Rigs, 1; wells drilling, 13; total, 14.

MISCELLANEOUS COUNTIES

Rigs

Beaver County—
22- 4-25e Maple, O. H. Bonner et al 1.
Kingfisher County—
6-16-7w Campbell, Pet. Eng. Core Drlg. 1.
Beckham County—
21- 9-23w Thompson, Producers Synd. 1.
Caddo County—
5- 5-9w Cutshall, Moran et al 1.
Murray County—
27-1s-3e Freeman, Thompson Oil Corp. 1.

Wells Drilling and Shut Down
(Shut Down wells indicated by *)

Harper County—
24-27-21w Selman, A. F. Kopison Oil Co. 1*.
14-25-22w Cooper, Hoffer Oil Co. 1*.
Woods County—
20-27-15w Marcum, Sooner State Oil Co. and E. R. Black 1*.
Noble County—
29-24-1w Reed, Midco Oil Corp. 6*.
1-22-2w White, K. D. Oil Co. 4.
15-21-2w Sams, Magnolia Pet. 1*.
Pearson, Magnolia Pet. 1*.
7-21-1w Williams, R. L. Corley 1*.
Cimarron County—
24- 6-2e School land, Jake G. Phillips 1*.
22- 5-2e School land, Sinclair Oil Co. 1.
27- 5-5e State land, Ramsey Bros. 1.
4- 5-6e School land, Ramsey Pet. Co. 1.
34- 4-1e School land, Ramsey Pet. Co. 1.
25- 3-7e Israel, Gladys Belle Oil Co. 1.
2- 2-9e Smaltz, Fenton, Brookins & Flowers 1*.
Texas County—
23- 2-18e Graves, Connelly, Trammell & Danner 1*.
26- 1-15e Hitch, Hydraulic Oil Co. 1*.
5- 1-19e Tansey, Trammell, Connelly & Danner 1*.
11- 1-18e Price, Three Way Oil Co. 1*.
Woodward County—
32-24-17w Simmons, Otstot Dev. Co. 1*.
25-21-21w Elmore, Sharon Oil Co. 1*.
Major County—
4-23-16w Parker, Henry Landon 1*.
Ellis County—
9-21-25w ———, Okla. Northern Oil Co. 1.
Dewey County—
9-18-15w Perfect, Huckleby McCoy 1.
Kingfisher County—
25-17-5w Pool, Ramsey Bros. 1.
27-16-6w Sturgeon, McKenna & Crawford 1.
26-16-5w Johnson, Galt Brown Oil Co. 1.
Canadian County—
6-14-6w Platt, A. D. Spears 1*.
1-10-6w Robinson, J. V. Bailey 1*.
Oklahoma County—
18-13-10w North, Carrell Oil Corp. 1*.
18-13-3w Lufkin, Slick & Bailey 1.
15-12-3w Thompson, Cromwell et al 1.
McIntosh County—
36-11-16 Bruner, J. E. Weible 1.
Pittsburg County—
32- 9-16 Smith, Pattison et al 2*.
Haskell County—
10- 9-18 Sanders, Marion Oil Co. 1*.
Latimer County—
15- 5-18 Murray, Limestone O. & G. Co. 1*.
Cleveland County—
22-10-2w Donovan, Cromwell & Franklin 1*.
7- 9-1w Alexander, Galt Brown Oil Co. 1.
20- 8-1e Woodrow, Mid-Cont. Pet. Corp. 1.
15- 7-1w Vandeer, Sooner Oil Co. 1*.
11- 6-1w Lefere, Magnolia Pet. 1.
Beckham County—
20- 9-23w Rosenbaum, Fred Coogan 1.
21- 9-23w Ensey, Rubana Oil Co. 1.
24- 9-23w Davis, Sayre O. & G. Co. 1.
28- 9-23w Beagle, Magnolia Pet. 1.
30- 9-23w Traves et al, Cal Wright et al 1.
32- 9-22w Barnes, O. & H. Pet. Co. 1*.
5- 8-23w ——— Price Bros., Martin and Atlantic 1.
Greer County—
16- 7-22w Chiney, Magnolia Pet. 1.
Caddo County—
22- 6-10w Jacobs, English Drlg. Co. 1.
29- 6-12w Galbreath, W. J. Hartley 1*.
4- 5-9w Lemp, Garvin Drlg. Co. 1.
12- 5-9w Rigney, J. P. Shelton et al 1*.
Commanche County—
10- 2-10w Skiter, Danciger Oil Co. 1.
Kiowa County—
6-2s-16w ———, Landfair et al 1*.
Jefferson County—
23-6s-6w Ryan, Amerada Pet. and W. H Gant 1.
18-7s-5w Trant, Denton, Lash & McCall 1.
Murray County—
17- 1-2e Wolfe, Revels & McGee 1*.
Marshall County—
11-5s-4e Chapman, Bilbo Oil 1*.
Bryan County—
26-5s-7e Marshall, Magnolia Pet. 1.
Love County—
7-7s-3e Askew, Magnolia Pet. 1.
Rigs, 5; wells drilling, 61; total, 66.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	6	245	2	1
Cowley	7	265	3	0
Chautauqua and Elk	9	230	1	1
Greenwood	16	1,015	4	0
Miami	15	940	2	0
Sumner	4	1,703	0	0
Miscellaneous	25	142	14	3
Total October	82	4,540	26	5
Total September	78	5,449	25	5
Difference	4	909	1	0

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl
Butler	8	10	18
Cowley	2	25	27
Greenwood	9	27	36
Marion	2	9	11
Sumner	11	37	48
Miscellaneous	7	70	77
Total October	39	178	217
Total September	57	173	230
Difference	18	5	13

BUTLER COUNTY

36-27-6 Figge, Liggett et al 3 ..... dry
4-28-6 McAffree, Mid-Kansas Oil Co. 1 dry
34-27-5 Hutchinson "C", Empire G. & F. Co. 1 70
17-27-7 Knox, Skelly Oil Co. et al 1 .. gas
34-27-6 Shriver, Magnolia Pet. Corp. 4.. 50
27-27-6 Stern, Patton et al 1 125

Wells completed 6
Production 245
Dry 2
Gas 1
Gas production 3,500,000

COWLEY COUNTY

32-31-7 Fuller, Hull et al 1 ..... dry
22-32-4 Hott, Mission Oil Co. 1 100
6-32-5 Elrode, Milligan et al 4 100
17-34-3 Baird, Carter Oil Co. 1 50
19-34-3 Shurtz, Shawyer et al 1 ..... dry
5-33-5 Baily, Roth & Faurot 1..... dry
25-34-6 Day, Lewis et al 1 15

Wells completed 7
Production 265
Dry 3

CHAUTAUQUA AND ELK COUNTIES

12-30- 9 Donnall, Seeley et al 3 ..... dry
11-31-10 Glasscock, Union Gas Corp 2 .. gas
9-31-10 Eyman, Hood & Co. 1 ..... gas
29-31-10 Rettig, Boudell et al 2 10
34-31-10 Lisco, Theta Oil Co. 2 30
3-30- 9 Mullens, Conley et al 1 75
15-30-10 Woods, Elmwood Oil Co. et al 1 100
11-31-10 Glasscock, Union Gas Corp. 3 .. gas
15-31-11 Elk Bank, Byington et al 1 .. 15

Wells completed 9
Production 230
Dry 1
Gas 2
Gas production 2,600,000

GREENWOOD COUNTY

23-22-11 Sheets, Roxana Pet. Corp. 3 .. 100
35-25-10 Taylor, Polhamus et al 5 45
2-26-10 Clopton, Rogers et al 1 75
3-22-10 Pixlee, Bruce, Bradley et al 1 225
35-25-10 Hays, Rogers et al 1 40
2-26-10 Hoover, Rogers et al 1 40
24-22-12 Fankhouser, Empire G. & F. Co. 3 50
35-23- 8 Beam, Phillips Pet. Co. et al 1 dry
7-25-11 Snyder, Smalley & Bement Oil Co. 1 ..... dry
4-27-11 Furguson, McGinnis et al 3 .. 100
2-22-10 Sheppard, Manhattan Oil Co. 4 200
17-22-11 Derbyshire, Titus et al 1 .... dry
32-22-11 Cragan, Connell Oil Co. et al 1 dry
35-25-10 Taylor, Polhamus et al 6 25

2-36-10 Forbes, Polhamus et al 1 75
Longwell, Rogers et al 1 40

Wells completed 16
Production 1015
Dry 4

MIAMI COUNTY

29-16-24 Snouffer, Big Jim Oil Co. 7 .. 40
Millis, Geo. D. Warr 9 150
Brimes Bros., Geo. H. Hafel et al 6 ..... dry
20-16-24 Hansen, G. E. Phillips, Agt. 11 50
29-16-24 Snouffer, Big Jim Oil Co. 6 .. 50
Snouffer, Big Jim Oil Co. 8 .. 100
Millis, Geo. D. Warr 8 75
Brimes Bros., Geo. H. Hafel et al 7 100
Hansen, G. E. Phillips, Agt. 12 35
Hansen, G. E. Phillips, Agt. 13 45
Hansen, G. E. Phillips, Agt. 14 125
Hansen, G. E. Phillips, Agt. 15 100
13-17-24 Dean, Russell & Holmes 2 20
12-17-24 ———, Alexander Barricklow 3 50
30-16-24 Sunley, The Texas Company 1 dry

Wells completed 15
Production 940
Dry 2

SUMNER COUNTY

25-31-2e Shore "B", Roxana Pet. Corp. 4 50
14-32-2e Community, Roxana Pet. Corp. 2 600
24-31-2e Shore, Roxana Pet. Corp. 4 .. 553
11-32-2e Oxford townsite, Pickard et al 1 500

Wells completed 4
Production 1703

MISCELLANEOUS COUNTIES

Coffey County—
22-22-13 Turk, Arkansas F. O. Co. 1 .. 25
Chase County—
36-18-6 Cornish, Phillips Pet. Co. 1 .. dry
19-19-8 Daub, Lariaux et al 1 ..... dry
36-18-6 Lipps, Preston & Pasewald 6 ... dry
Morris County—
24-17-9 Cessman, Rock Creek O. & G. Co. 1 ..... dry
8-17-5 Seastead, Hawes, Ainsworth et al 1 ..... dry
11-17-7 Neigle, Nicols et al 1 ..... gas
Reno County—
21-22-5w Rowland, Phillips Pet. Co. 1 dry
8-24-7w Crotts, Findless et al 1 ..... dry
Hodgeman County—
19-21-22w Frizzell, Spencer & Marconnette 1 ..... dry
Woodson County—
13-25-15 Morgan, Reeser et al 1 ..... dry
Pratt County—
32-27-13w Elliott, Elliott et al 1 ..... dry
Russell County—
5-14-15w Dortland, Midwest Ref. Co. 6 50
Seward County—
14-33-33w Son, Wilson et al 1 ..... dry
McPherson County—
30-21-5w Ross, Laughlin et al 1 ..... dry
Labette County—
7-34-17 Rainey, Shannon, Marshall & Gerrard 11 20
Rainey, Shannon, Marshall & Gerrard 10 25
30-31-18 Dartnell, Labette Pet. Co. 4 .. 10
Dartnell, Labette Pet. Co. 3 .. 6
Anderson County—
2-22-18 Hewitt, W. C. Newman 1 .... dry
Franklin County—
13-18-20 Barr, W. W. Singer 1 3
Barr, W. W. Singer 2 3
Montgomery County—
1-34-13 Brown Land Co., J. P. Brady 1 gas
Brown Land Co., J. P. Brady 2 gas
Marion County—
2-22-3 Bern, Cameron et al 1 ..... dry

Wells completed 25
Production 142
Dry 14
Gas 3
Gas production 2,100,000

BUTLER COUNTY

Rigs

26-25-5 Luchty, Reeder et al 1.
25-26-5 Sluss, Lebow, Travis et al 5.
31-26-6 Fisher, Payne & McKenna 1.
20-26-8 Drum-Bitler, Rogers et al 17.
24-27-3 Baysinger, La Rob Oil Co. 1.
1-27-6 Dixon, White Eagle O. & R. Co. 1.
5-27-6 Beedles, Kean et al 1.
13-27-6 Thompson, White Eagle O. & R. Co. 1.

Wells Drilling

18-25-4 Joseph, Wichita Drlg. Co. 1.
4-27-6 Shaffer, Rosenthal et al 7.
5-27-6 Doughty, Bronson et al 3.
6-27-6 Doughty, Mathews, Ralston et al 1.
36-27-6 Figge, Liggett et al 4.

Shut Down

30-26-6 Unger, Payne & McKenna 1.
26-27-5 Bryson, Cress, Frank et al 1.
36-27-5 Covert, Reynolds et al 1.
21-28-5 Clubine, Madison et al 1.
21-29-4 Holcomb, E. Wilcox et al 1.
Rigs, 8; wells drilling, 10; total, 18.

COWLEY COUNTY

Rigs

22-32-4 Roberson, McNabb et al 1.
33-32-7 Reynolds, Blue Stem Oil Co. 1.

Wells Drilling

3-30-3e Daniels, Vickers Pet. Co. 1.
29-30-3e Beard, Roxana Pet. Co. 1.
30-30-4e Titsworth, Trees Oil Co. 1.
29-30-5e Myers, Shawver et al 1.
19-31-3e Harness, Roxana Pet. Corp. 1.
20-31-4e Hughes, Hannan et al 1.
22-32-4e Graham, Vickers & Philmack Oil 1.
Winfield townsite, Wakefield et al 1.
Winfield townsite, Roth & Faurot 1.
24-32-4e Nunman, J. A. Hull 2.
7-32-5e Biddle, Arkansas Fuel Oil Co. 4.
32-32-7e Reynolds, Blue Stem Oil Co. 2.
7-33-3e Thurow, Barnadall Oil Co. 1.
32-33-4e Adams, Roth & Farout 1.
5-33-5e Henderson, Boggs Drlg. Co. 1.
7-34-6e Gearhart, Pryor & Lockhart 1.

Shut Down

20-30-3e Nave, Roxana Pet. Corp. 1.
20-30-6e Manley, Allison & Fitzwilliams 1.
4-31-5e Elliott, Tatlock & McCulloch 1.
15-32-4e School Land, Marland Oil Co. 2.
5-33-5e Bell, Neeley O. & G. Co. 1.
8-33-5e Baily, Klossie & Kitchell 1.
4-33-7e Countryman, Forrester et al 3.
31-34-3e Johnson, Shawver et al 1.
17-34-4e Hughes, Nathan & Brinn 1.
Rigs, 2; wells drilling, 25; total, 27.

GREENWOOD COUNTY

Rigs

7-23-10 Pixlee, Ritchey & Moore 2.
31-32-10 Prather, Skelly Oil Co. 3.
35-32-13 Ott, Empire G. & F. Co. 4.
36-24-10 Mock, McGinnis et al 5.
19-24-11 Freeman, Christler et al 2.
36-24-12 Hoover, Christy et al 1.
15-24-13 Bowles, Simmons & Rhodes 1.
2-25- 8 Tucker, Ballard & Breach 1.
34-25-10 Standard, Rogers et al 1.

Wells Drilling

10-22-10 Pixlee, Transcontinental Oil Co. 1.
11-22-10 Sheppard, Manhattan Oil Co. 5.
24-22-10 Warrensburg, Skelly Oil Co. 1.
23-22-11 Duby, Empire G. & F. Co. 17.
23-22-12 Fankhouser, Theta Oil Co. 1.
12-22-12 Boles Prairie O. & G. Co. 2.
24-22-12 Fankhouser, Darby Oil Co. 4.
25-22-12 Ott, Empire G. & G. Co. 3.
29-22-13 Fankhouser, McCulloch et al 1.
30-22-13 Lamont, Rogers et al 1.
5-23-12 Hollis, Jennings et al 1.
31-24-13 Dennis, Christy et al 2.
7-25- 9 Wilkerson, Lassen et al 2.
10-25-13 Roglin, Bisagno et al 1.
15-25-13 Brown, Cross et al 1.
2-26-10 Cunnings, Higgins et al 1.
2-26-10 Fair Grounds, Ballard, Patton et al 1.
Wyant, Rogers et al 1.
Westphal, Wahn et al 1.

Shut Down

11-23- 9 Nettle, Phillips Pet. Co. 1.
35-25-10 Hayes, Rogers et al 2.
16-25-13 Hoggart, Mendenhall et al 1.
3-26-10 Stith, Rogers et al 1.
3-26-10 Old, Wahn et al 1.
26-27- 8 Lewis, B. G. & M. Oil Co. 1.
33-27-13 Lesseney, Culp et al 1.
1-28-12 Hayes, Swanson et al 1.
Rigs, 9; wells drilling, 27; total, 36.

MARION COUNTY

Rigs

2-17-4e Mott, Harwood & Winters 1.
9-19-4e Urich, Frank et al 1.

Wells Drilling

2-17-4e Ucker, Harwood & Winters 1.
15-17-4e McNicols, Harwood & Winters 1.
1-18-4e Harkte, Prairie O. & G. Co. 1.
9-20-4e Schlothour, Empire G. & F. Co. 1.
31-21-4e Townsend, Crow et al 2.

Shut Down

31-17-4e Ucker, Givens et al 1.
20-18-4e Melcher, Skow et al 1.
17-19-4e Reed, Reed et al 1.
1-21-1e Lehrman, Sunray Oil Co. 1.
Rigs, 2; wells drilling, 9; total, 11.

SUMNER COUNTY

Rigs

25-31-2e Riverbed, Roxana Pet. Corp. 8.
Wiles, Roxana Pet. Corp. 3.
Churchill, Roxana Pet. Corp. 9.
12-32-2e Oxford townsite, Darby Pet. Co. 1.
13-32-2e Buffington, Phillips Pet. Co. 1.
Oxford townsite, Midco Oil Co. 1.
Oxford townsite, Wenzel Oil Co. 1.
14-32-2e Oxford townsite, Noble et al 1.
Oxford townsite, Darby Oil Co. 1.
Oxford townsite, Darby Oil Co. 1.
9-35-1e Volker, Otstot et al 1.

Wells Drilling

9-30-2e Love, Champlin O. & R. Co. 1.
Latta "B," Champlin O. & R. Co. 2.
25-31-2e Wiles, Roxana Pet. Corp. 4.
Rutter, Roxana Pet. Corp. 5.
Mason, Roxana Pet. Corp. 5.
Reitz, Darby Oil Co. 3.
26-31-2e Jenkins, Roxana Pet. Corp. 1.
35-31-2e Bussard, Davis & Hazlett 1.
36-31-2e Taton, Roxana Pet. Corp. 3.
Wenrich, Roxana Pet. Corp. 3.
11-32-2e Oxford townsite, Fine et al 1.
Looker, Jones et al 1.
Oxford townsite, Roxana Pet. 3.
Oxford townsite, Ramsey & Fine 1.
Oxford townsite, Shawver et al 1.
12-32-2e Oxford townsite, Noble et al 1.
Oxford townsite, Ozark Drlg. Co. 1.
Cravens, Palmer et al 1.
Oxford townsite, Midco Oil Co. 1.
Oxford townsite, Trees Oil Co. 1.
14-32-2e Emerich, Roxana Pet. Corp. 1, 2, 3.
Oxford townsite, Roxana Pet. Corp. 1, 4, 5, 6.
Oxford townsite, Roxana Pet. 2.
Oxford townsite, Roxana Pet. 1.
Oxford townsite, Stanley & Jarvis 1.
36-32-2e Jeffie, Roxana Pet. Corp. 1.
23-34-2w Douglas, Gypsy Oil Co. 1.
11-34-4w Wycoff, Jarvis et al 1.

Shut Down

11-32-2e Oxford townsite, Flitch et al 1.
12-32-2e Oxford townsite, Moore et al 1.
22-33-3w Bartlow, Otstot et al 1.
4-34-3w Wenrich, Jarvis et al 1.
Rigs, 11; wells drilling, 37; total, 48.

MISCELLANEOUS COUNTIES

Rigs

Dickinson County—
35-16- 4 Uteck, Harwood & Winters 1.
Morris County—
32-14- 7 Barber, Klein et al 1.
Osborn County—
30- 9-15w Prather, Davis et al 1.
Pottawatomie County—
17- 9-12 Stewart, Crawford et al 1.
31- 9-12 Bratchbar, Crawford et al 1.
Reno County—
6-22-4w Williams, Danciger et al 1.
Rooks County—
14- 9-16w Rathburn, Keyes Pet. Co. 1.

Wells Drilling and Shut Down

(Shut Down Wells indicated by *)

Barber County—
27-30-13w Pickens, Rowland et al 1.
17-31-12w Winters, Merriman et al 1.
19-33-12w Boggs, Schaffer et al 1.
2-33-13w Carter, Schaffer et al 1.
Barton County—
6-18-12w Everleigh, Huffine & Crane 1.
17-19-11w Smith, Huffine et al 1.
13-20-13w Ward, Everette & Wiley 1.
Chase County—
9-21- 7 Carson, Greener, Fowler et al 1*.
12-22- 9 Evans, Basom et al 1.
26-22- 9 Leedy, Basom et al 1.
Chautauqua County—
12-32-10 Julian, Theta Oil Co. 1.
Clark County—
16-31-23w Mitchell, Walker & Walner 1*.
Cloud County—
6- 6-4w Murdock, Concordia O. P. 1*
Coffey County—
11-22-15 Douglas, Crooks et al 1*.
Dickinson County—
31-15- 4 Dunlap, D. I. Hall 1.
15-16- 4 Kutler, Frank et al 1*.
24-16- 4 Sherman, Loy et al 1.
Elk County—
17-29-10 Young, Arkansas Fuel Co. 1.
20-29-10 Mullendore, Ohio Fuel Oil Co. 1*.
6-29-12 Flack, Elmwood & Phoenix Oil 1.
35-31-10 Cunningham, Griffeth, Bell et al 1*.
3-31-11 Elk Falls, Roth & Faurot 1.
Ellis County—
26-13-16w Leiker, Tatlock et al 1.
27-13-16w Reidell, Midwest Ref. Co. 19.
Ellsworth County—
9-15-10w Maximer, Valerius & Cheney 1.
24-16- 9 Gregory, Philmack Oil Co. 1.
Franklin County—
17-16-18 Owens, Smith, Thrice & Fisher 1*.
Geary County—
16-10- 5 Fawley, Brinkley et al 1.
Graham County—
27- 8-25w St. John, Gulf Coast Drlg. Co. 1*.
Jefferson County—
13- 9-19 Edwards, Northern Counties Oil 1*.
Labette County—
1-33-17 Hornbeck, Cowell et al 1*.
5-35-20 Lipps, Wantland et al 1*.
Logan County—
14-14-33w Andrews, Coon et al 1*.
Marshall County—
4- 4- 7 Finn, Marshall Oil Synd. 1*.
McPherson County—
1-17-3w Lamar, Lamar et al 1.
31-18-2e Anderson, McPherson O. & G. 1.
32-18-2e Chinberg, The Texas Company 1.
8-19-2w Clark, Merriman et al 1.
26-19-3w Jones, Mid-Kansas Oil Co. 1.
20-20-3w Gary, Polar Oil Co. 1*.
Mead County—
9-33-28w Lilly, Blackwell O. & G. Co. 1.
Montgomery County—
31-31-14 Faler, Ramler et al 1*.
29-32-17 Hellum, Earl & Overlease 1*.
4-35-14 Walker, Gallowye & Roberts 1*
Morris County—
16-17-5e Nelson, Phillips Pet. Co. 1.
Nemaha County—
19- 3-11 Myers, Nemaha O. & G. Co. 1*.
Osage County—
3-15-15 Lease, Barber et al 1*.
27-15-16 Baley, West et al 1*.
8-17-17 Neil, Mull Vit Dev. Co. 1*.
Pottawatomie County—
11-10-12 St. Mary, Crawford et al 1*.
Reno County—
35-22-10w Keesling, Pryor & Lockhart 1*.
Riley County—
20-10- 7 Thierer, Youker et al 1.
Rooks County—
3-10-16w Kruse, Darby Oil Co. 1.
28-10-16w Mattison, Streeter & Stearns 1*.
Russell County—
30-12-15w Austin, Midwest Ref. Co. 21.
32-13-15w Baxter, Keys Pet. Co. 1.
6-15-15w Goraham, Streeter & Stearns 1.
Saline County—
17-15-2w Muir, Mentor O. & G. Co. 1.
15-15-4w Holquest, Thrall et al 1*.
Stafford County—
23-21-11w Siffers, Harper & Medeo 1.
Stephens County—
31-33-37w Jones, Independent O. & G. 1*.
Wabaunsee County—
9-12-10 Blank, Braken, McClure et al 1.
19-12-11 Schwalm, Empire G. & F. Co. 1.
15-13-12 Henderson, Williams et al 1*.
Wilson County—
22-28-13 Thompson, Price et al 1*.
29-30-17 Smally, West et al 1*.
Woodson County—
13-26-14 Daniels, Skelly Oil Co. 1*.
23-26-14 Lauber, McCulloch et al 1*.
Duncan, Peerless O. & G. 1*.
26-26-14 Gregory, McMullen et al 1*.
Rigs, 7; wells drilling, 70; total, 77.

SOUTHWEST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rig	Drlg.	Ttl.
Mirando	23	230	10	8	9	23	32
Rockdale-Minerva ...	2	10	1	0	2	8	10
Luling	1	30	0	0	0	1	1
Kingsville ..	0	....	0	0	0	4	4
Refugio	0	....	0	0	0	11	11
Adams Gas Field	3	....	2	1	2	1	3
Somerset	0	....	2	0	0	0	0
Dale Field ..	10	190	4	0	2	5	7
*Misc.	16	12	12	3	9	37	96
Total Oct. ..	57	474	31	10	24	140	164
Total Sept.	53	3,529	24	12	23	148	171
Difference	4	3,055	7	2	1	8	7

*Includes the White Point Gas area.

WELLS COMPLETED
MIRANDO TERRITORY

Driscoll—Duval—
Driscoll et al 5 ..... gas
Cole Field—
Houston Oil-Sun 1-C ..... gas
Trussell, Cezeaux-Putman 1 ..... gas
O. W. Killam 1 ..... gas
Houston Oil-Rotsana 1-F ..... abd
Humble-Reiter-Foster—
Humble-Reiter-Foster 4 35
Duval Wildcats—
Schlessinger Oil 1 ..... abd
Green-Woodward 1 ..... abd
Randado Pool—Jim Hogg—
Moody Corp. 10 25
Moody Corp. 11 25
Moody Corp. 12 20
Magnolia Petroleum 28 40
Magnolia Petroleum 29 75
Henne, Winch & Farias—
W. F. Morgan 2 ..... gas
Cole Field No. 2—Webb—
Cole Petroleum 48 ..... abd
Cole Petroleum 49 ..... abd
Alberca Field—
Magnolia Petroleum 1 ..... gas
Schott Field—
Magnolia Petroleum 9 10
Aviator Field—
Pittman & Moriarty 8 ..... abd
Carolina-Texas Pool—
T. P. Morgan 2 ..... abd
Houston Oil 2 ..... abd
Zapata County—
Duke et al 3 ..... abd
O. W. Killam 4 ..... abd

Wells completed 23
Gas wells 6
Oil wells 7
Dry and abandoned 10
Oil production 230
Gas production 174,000,000

SOMERSET FIELD

Associated Pet., 1 Koehler ..... abd
Associated Pet., 2 Ernest ..... abd

Wells completed 2
Dry and abandoned 2

LULING FIELD

Magnolia Petroleum, Proctor 15 30

Well completed 1
Production 30

DALE FIELD

Wm. F. Morgan, Osteen 1 25
Sun-Empire, Talley 3 25
Texas and Humble, Clingensmith 3 70
The Texas Company, Beatty 1-B ..... abd
Gulf Production, Witser 1 ..... abd
Magnolia Petroleum, Taylor 1 ..... abd
The Texas Company, Lackey 3 ..... abd
Humble, Clingensmith 2 5
Humble, Clingensmith 1 10
The Texas Company, Lackey 1 55

Wells completed 10
Oil wells 6
Dry and abandoned 4
Production 190

ADAMS GAS FIELD

Mid-Kansas O. & G., Nixon 1 ..... gas
Southern Gas, Weimers 1 ..... abd
Witherspoon, Fasseler 1 ..... abd

Wells completed 3
Gas 1
Dry and abandoned 2
Gas production 10,000,000

ROCKDALE-MINERVA

Noack & Laning, Lowenstein 1 ..... abd
Kent-Middleton, Bartlett 2 5
W. A. Jones, Smith 2 5

Wells completed 3
Dry and abandoned 1
Production 10

WHITE POINT GAS FIELD

Houston Oil, Ragsdale 1 ..... gas
Houston Oil, Sun 1-A 30
Mission Drilling, Cage 2 ..... gas

wells completed 3
Gas 3
Gas production 105,300,000

MISCELLANEOUS

Bexar County—
Humble Oil & Refg., Gembler 2 ..... abd
A. R. Beal, Ackerman 1-A ..... abd
W. L. McClanahan, Sodrok 5 ..... abd
Caldwell County—
Davis-Bruner, Davis 1 12
DeWitt County—
McNeil & Matthews, Kaiser 1 ..... abd
Fayette County—
Magnolia Petroleum, Fordtran 1 ..... abd
Gonzales County—
Martin Oil & Dev., Preston 1 ..... abd
Jackson County—
Houston Gulf Gas, Druschell 5 ..... abd
Karnes County—
Maurer & Ellis, Henke 1 ..... abd
Refugio County—
Hous on Gulf Gas, Shelly 1 ..... abd
San Patricio County—
J. E. Walsh, Clara M. Oven 1 ..... abd
Starr County—
Milham Corp., Salinas 1 ..... abd
Wilson County—
Thomas et al, Haese 1 ..... abd

Wells completed 13
Dry and abandoned 12
Production 15

BEXAR COUNTY

Well Drilling

Ward, Allen Burnam 1.
Well drilling, 1; total, 1.

BEE COUNTY

Rig

Ray, D. Hewitt 2.

Wells Drilling

Ray, D. Hewitt 1.
Hicks, Nichols & White 1.
Perry & Chesnut, Red Ant Oil & Gas 1
Rig, 1; wells drilling, 3; total, 4

BASTROP COUNTY

Roberts, Fred Adams 1.
Well drilling, 1; total, 1.

CALDWELL COUNTY

Rigs

Beatty, The Texas Company 3.
Lackey, The Texas Company 2.

Wells Drilling

Clingensmith, The Texas Company 5, 6.
Clingensmith, Humble Oil & Ref. Co. 3, 4.
Moore, Wm. F. Morgan 1.
Rios, Magnolia Petroleum 18
Kelly, North & South 1.
Tiller, North & South 2.
Thomas, Calco Petroleum 2.
Hardeman, Detex Oil 1.
Blackwell, Martin & Wright 1.
New, Ratcliffe 1.
Car er, Sutton & Smith 1, 2.
Rigs, 2; wells drilling, 14; total, 16

DEWITT COUNTY

Rig

Boldt, Collette Oil 1.

Wells Drilling

Smith, Empire Southern 2.
Toland, McNeil & Matthews 1.
Gohmert, Williams & Gates 1.
Tully, Yoro Development 1.
Rig, 1; wells drilling, 4; total, 5

DIMMITT COUNTY

Well Drilling

City Natl. Bank, Humble Oil & Refg. 1
Well drilling, 1; total, 1.

FRIO COUNTY

Rig

Blackaller, P. A. Neil-n 2.

Well Drilling

Rig, 1; well drilling, 1; total 2

FAYETTE COUNTY

Rig

———, E. A. Bainbridge 1.
Rig, 1; total, 1.

GOLIAD COUNTY

Rig

Pettus, Houston Oil 4.

Wells Drilling

Lott, Houston Oil 1.
Ideus, C. W. Simpson 1.
Rig, 1; wells drilling, 2; total, 3

GONZALES COUNTY

Wells Drilling

Wilkerson, Dunning & Pierce 1
Denman, Bristol Oil & Gas 2.
Vaughan, Joe Bruner 1.
Elder, Gonza Petroleum 1, 2.
Sinclair, Gonza Petroleum 1.
Campbell, L. L. Jones 1.
Plowman, The Texas Company 2
Hampton, L. P. Unkel 1.
Wells drilling, 9; total, 9.

GUADALUPE COUNTY

Wells Drilling

Weinert, F. A. Lain 1.
McAllister, H. H. Tample 1.
Wells drilling, 2; total, 2.

HAYS COUNTY

Well Drilling

Hohenburg, J. E. Rodgers 1.
Wells drilling, 1; total, 1.

KARNES COUNTY
Wells Drilling
Butler, Reynosa Oil 2.
Well drilling, 1; total, 1.

KINNEY COUNTY
Wells Drilling
Weatherby, Havelin Oil 1.
Clamp, Stephens and others 1.
Wells drilling, 3; total, 2.

KLEBERG COUNTY
Wells Drilling
Kissman, Houston Oil 1, 2.
Kleberg, Humble Oil & Refg. 4.
Sexauer, Humble Oil & Refg. 2.
Wells drilling, 4; total, 4.

LAVACA COUNTY
Well Drilling
Russek, M. L. Benedum 1.
Well drilling, 1; total, 1.

LEE COUNTY
Well Drilling
Henderson, Allen Creek Oil 1.
Well drilling, 1; total, 1.

LIVE OAK COUNTY
Rigs
Cartwright, Houston Oil 19, 21.
West estate, Morgan-Roxana 1.
Wells Drilling
McNeil, Delta Oil Co., Inc. 1.
Cartwright, Houston Oil 20.
Stewart, Encino Oil 1.
Thomas, R. P. Lightfoot 1.
Kolb, Roy Shipman 1.
Sartain, Simmons Oil 4.
Riberts, J. W. Walton 1.
Rigs, 2; wells drilling, 7; total, 9.

MEDINA COUNTY
Rigs
Nixon, Mid-Kansas Oil & Gas 2.
Adams, Western-Witherspoon 3.
Wells Drilling
Nixon, Witherspoon Oil 5, 4.
Rothe, California-Medina 1.
Mumme, Johnson 1.
Keller, Magnolia Petroleum 1.
Taylor, Medina Oil 1.
Nixon, R. P. O'Brien 1.
Zerr, Cecil Switzer 1.
Oeffingers, J. A. Swayze 1.
Rigs, 2; wells drilling, 9; total, 11.

MAVERICK COUNTY
Wells Drilling
Whipff, Johnstone & Hout 1.
Indio, Ryan Consolidated 1.
Chittim, Rycade Oil 1, 2.
Sullivan, Rycade Oil 2.
Wells drilling, 5; total, 6.

MILAM COUNTY
Rigs
Henerson, Kent-Middleton 1.
Gore, J. W. Kemp 1.
Wells Drilling
Arnold, Kent-Middleton 1.
Stephens, Coffield-Hale 2.
King, Groneman Brothers 1.
Neely, W. S. Gutherie 1.
Batts, Jennings Oil 1.
Casparis, W. A. Jones 1.
Redick, Parkhill et al 1.
Richards, Yegua Oil 1.
Rigs, 2; wells drilling, 8; total, 10.

M'MULLEN COUNTY
Wells Drilling
Fisher, Houston Gulf Gas 2.
Shiner, Nelson & Woods 1.
Jacob, George B. Pickett 1.
Wells drilling, 3; total, 3.

NUECES COUNTY
Wells Drilling
Dunn, Sexat Oil 4.
Meaney, Sexat Oil 2.
Well, Sexat Oil 2.
Wells drilling, 3; total, 4.

REFUGIO COUNTY
Wells Drilling
Terrell, George M. Ball 1.
Rooke, Houston Oil 2-A.
Moody, Houston Gulf Gas 2.
Heard, Houston Gulf Gas 3.
Shelly, Houston Gulf Gas 4.
Ryals, Houston Gulf Gas 3.
Roger, Wm. F. Morgan 2.
Lambert, Wm. F. Morgan 8, 2, 7.
Ryals, Wm. F. Morgan 1.
Wells drilling, 11; total, 11.

SAN PATRICIO COUNTY
Rig
Humble, Houston Oil 3.
Wells Drilling
Sun, Houston Oil 2-A.
Humble, Houston Oil 1, 2.
Mathis, Huber & Crawford 1.
Harwood, Mission Drilling 1.
Sullivan, National Oil 1.
Garrett, George B. Pickett 1.
Cage, Sexat Oil 6.
Rachal, Sexat Oil 9, 12.
Robinson, John Sigmund 9.
Rig, 1; wells drilling, 11; total, 12.

TRAVIS COUNTY
Well Drilling
——, Frank Gomillion et al 1.
Well drilling, 1; total, 1.

VICTORIA COUNTY
Rigs
Welder, Humble Oil & Ref. Co. 1.
Wells Drilling
Reeves, R. M. Talbott 1.
Stoever, Valley Oil 1.
Rig, 1; wells drilling, 2; total, 3.

VAL VERDE COUNTY
Wells Drilling
Moore, A. Blume 1.
Holman, Crusoe Williams 1.
Sellers, Douglas Oil 1.
Russell, East Del Rio Oil 1.
Whitehead, Independent Operator 1.
Whitehead, Magnolia Petroleum 1.
Mills, O. O. Owens 1.
Wells drilling, 71; total, 7.

ZAVALLA COUNTY
Wells Drilling
West, J. G. Pundt 1.
West, Western Gas & Fuel 1.
Wells drilling, 2; total, 2.

MIRANDO TERRITORY
Rigs
Benavides, Cole Petroleum 38.
Survey 16, Ball, National Oil 1.
Jim Hogg, Randado, M. S. Bank, Magnolia 30.
Alworth, Garza, Alworth-Stevents Hild 20.
Starr, Kelsey, Woodruff et al 1.
Guerra, Harston et al 1.
——, Foltz et al 1.
Webb, Carolina-Texas, Benavides, Houston Oil 3.
Zapata, Martinez, Henne, Winch & Farise 1-A.

Wells Drilling
Brooks, Lasater, The Texas Company 3.
Duval, Cole, Benavides, O. W. Killam 8.
Bruni, O. W. Killam 3.
Bruni, Houston Oil A-2.
Piedras Pintas, Walsh, Humble Oil & Ref. 7.
Duval, Piedras Pintas, Walsh, Humble 7.
Wildcats, Moody, Schlesinger Corp 2.
Hidalgo, Adams, Queen City Oil & Gas 1.
Daskan, D. L. Smith Oil 1.
Jim Hogg, Martinez, Smi-Lock Oil 1.
Campbell, Paesano Oil 1.
Canales, O. W. Killam 1.
Jones, Holden et al 3.
Holblen, Hamilton et al 1.
Starr, Garcia, Commonwealth Oil 1.
Garcia, Deckle & McCarley 1.
Webb, Schott, Garcia, Magnolia Pet. 10.
Albercas, Bruni, O. W. Killam 7.
Carolina-Texas, de la Garza, D. J. Simmons 2.
Webster, Magnolia Pet. 2.
Andrews, Lopez, R. M. Sturn 1.
Cole, Benavides, Cole Pet. 36.
Zapata, Hinnant, O. W. Killam 5.
Rigs, 9; drilling, 23; total, 32.

NORTH AND WEST TEXAS

SUMMARY OF WELLS COMPLETED NORTH CENTRAL AND WEST TEXAS OCTOBER, 1927

County—	Comp.	Prod.	Dry	Gas
West Texas—				
Crane	12	26,035	..	..
Crockett	2	1,040	..	..
Dawson	1	....	1	..
Glasscock	1	....	1	..
Howard	7	249	3	..
Loving	1	....	1	..
Jones	1	....	1	..
Mitchell	2	31	1	..
Nolan	1	....	1	..
Pecos	6	24,202	..	..
Runnels	1	200	..	..
Tom Green	1	....	1	..
Upton	4	3,706	1	..
Val Verde	1	....	1	..
Winkler	2	3,458	..	..
Total West Texas	43	58,971	12	..
North Central Texas—				
Archer	24	330	17	..
Brown	62	7,920	13	2
Callahan	13	535	4	..
Coleman	12	50	9	2
Clay	2	....	2	..
Cooke	21	526	8	1
Eastland	15	1,018	6	1
Jack	19	355	11	..
Knox	2	....	2	..
Montague	5	186	1	1
McCulloch	3	....	3	..
Palo Pinto	4	....	3	1
Shackelford	4	....	4	..
Stephens	3	....	2	1
Throckmorton	3	15	3	..
North Central and West Texas—				
Wichita	9	288	3	..
Wilbarger	6	177	1	..
Wise	1	....	1	..
Young	12	189	6	..
Total North Central Texas	220	11,598	98	9
Grand total West and North Central Texas, October	263	70,569	110	9
Grand total West and North Central Texas, September	287	86,612	128	7
Difference	24	16,052	18	2

Summary of Rigs and Wells Drilling in North Central and West Texas, October, 1927

County—	Rigs	Drlg.	S.D.	Ttl.
West Texas—				
Crane	16	32	2	40
Crockett	6	12	5	23
Howard	4	18	4	26
Jones	2	6	4	12
Mitchell	1	..	2	3
Pecos	44	31	10	85
Reagan	6	2	11	19
Upton	10	4	5	19
Winkler	21	49	12	82
Misc. Counties	17	21	46	84
Total West Texas	127	165	101	393
North Central Texas—				
Archer	8	15	2	25
Brown	9	41	16	66
Callahan	3	12	8	23
Coleman	6	13	12	31
Cooke	6	8	7	21
Eastland	9	30	10	49
Jack	6	10	3	19
Montague	4	9	6	19
Palo Pinto	3	8	7	17
Shackelford	3	8	7	16
Stephens	6	9	8	23
Throckmorton	3	5	1	9
Wichita	7	17	3	27
Wilbarger	5	11	4	20
Young	14	27	7	48
Misc. Counties	4	14	25	43
Total North Central Texas	92	237	127	456
Grand total, North Central and West Texas, Oct.	219	402	228	849
Grand total, North Central and West Texas, Sept.	152	412	218	782
Difference	67	10	10	67

NORTH CENTRAL TEXAS

COMPLETIONS
ARCHER COUNTY

Allen, Paul Traham 1 ..... dry
Andrews, Barkley-Meadows et al 2 ..... dry
Farmer-B, Burton et al 1 35
Farmer, McGregor and Panhandle Ref. 2 35
Farmer, Mitcham-Hart et al 1 ..... dry
Griffin, Camp & Hill 1 ..... dry
Kemp & Kell, Wayne Hammon et al 3 dry
J. H. White, Koll-Tex Oil 6 20
L. F. Wilson, O'Neil & Carter 1 15
L. F. Wilson, Royal Pet. 17 45
Norred, Consolidated Oil 1 ..... dry
Hudson, Long et al 1 ..... dry
Anderson, Perkins-Cullum & Litchfield 1 dry
Andrews, Barkley-Meadows & Cater 1. dry
Duggan, Republic Prod. Co. 1 ..... dry
Farmer, Lee Wilson 1 15
Edwards, Darr et al 1 ..... dry
Helm, C. B. Long et al 1 ..... dry
Perkins et al, C. B. Long et al 2..... 110
Herron, Allday Oil Corp. et al 1 ..... dry
Farmer-C, Burton et al 1 70
Beardon, Consolidated Oil 1 ..... dry
Andrews, Sun Oil 2 ..... dry
Wilhelm, The Texas Company 1 ..... dry

Completions 24
Production 330
Dry holes 17

BROWN COUNTY

Looper et al, Warren Dev. Co. 1 ..... dry
Newton, Natural G. & F. Co. 2 ..... gas
Guyer, Clark et al 1 ..... dry
M. L. Smith, E. L. Smith Oil 7 350
M. L. Smith, Sinclair O. & G. 5 200
M. L. Smith, Sinclair O. & G. 4 500
Ellis, Selby O. & G. 16 15
M. L. Smith, Roxana Pet. 19 144
M. L. Smith, Roxana Pet. 18 106
Gilbreath, Humble O. & R. 1 320
Forest, Humble O. & R. 13 ..... dry
Byler, Humble O. & R. 3 144
Gilbreath-A, J. K. Hughes Dev. 1 409
Teston, Gilham & McMurray 17 60
M. L. Smith, Forest Oil 10 150
Giddings, Deauvaux 1 ..... dry
Perry, Creque L. & R. 1 ..... dry
Ellis, Selby O. & G. 15 ..... dry
M. L. Smith, Roxana Pet. 17 184
M. L. Smith, Roxana Pet. 14 185
Miller, Ross Drlg. Co. 1 ..... dry
Jones, Josey & Flinchbaugh 1 ..... dry
McCully, Humphreys Bros. 2 3
Kilgore-D, Humble O. & R. 10 ..... dry
Collier, Gholson et al 2 ..... dry
Moore, Forest Oil 2 70
Hart & Roth, Brooks Dozier 1 17
Stout, Bradstreet et al 10 35
Miller, Adamson & Bearman 1 ..... gas
M. L. Smith, Cranfill & Reynolds 6 450
M. L. Smith, Cranfill & Reynolds 8 25
M. L. Smith, Cranfill & Reynolds 11 25
M. L. Smith, Forest Oil 11 50
Teston, Gilman & McMurray 16 50
J. Gilbreath-B, J. K. Hughes Dev. 1 ..... dry
J. Gilbreath, Humble O. & R. Co. 2 384
Hickman, Kone Production Co. 2 100
J. Gilbreath, Humble O. & R. Co. 3 207
M. L. Smith, Roxana Pet. Corp. 15 ..... dry
M. L. Smith, Roxana Pet. Corp. 20 177
M. L. Smith, Roxana Pet. Co. 23 80
Ellis, Selby Oil & Gas Co. 17 100
M. L. Smith, Sinclair O. & G. Co. 3 80
Hickman, The Texas Company 23 51
Edmonson, Tower & McKanna, Inc. 1 ..... dry
Teston, Valley Oil Co. 7 30
Kilgore, Gilman & McMurray 1 ..... dry
J. Gilbreath, Humble O. & R. Co. 3 260
Newton, McMurray et al 15 5
Newsome, Phillips Pet. Co. 4 240
M. L. Smith, Roxana Pet. Corp. 8 6
M. L. Smith, Roxana Pet. Corp. 21 88
M. L. Smith, Roxana Pet. Corp. 22 40
M. L. Smith, Roxana Pet. Corp. 24 91
Truehart, Scrivenor et al 1 10
M. L. Smith, Sinclair O. & G. Co. 6 215
M. L. Smith, Sinclair O. & G. Co. 7 400
Moore, E. L. Smith Oil Co. 1 154
M. L. Smith, E. L. Smith Oil Co. 8 800
M. L. Smith, E. L. Smith Oil Co. 18 610
Smith, Wheelock & Collins 1 280

Completions 62
Production 7920
Gas wells 2
Gas production 3,400,000
Dry holes 13

CALLAHAN COUNTY

Swafford, Bradstreet 1 190
Baum, Prairie Oil & Gas Co. 4 50
McCord, Stalker Oil Co. 1 ..... dry
Seale Estate, Stalker Oil Co. 1 ..... dry
Blakley, Star & Kiser 1 ..... dry
Jackson-B, Beams & Kingwood 3 8
Swafford, Bradstreet 2 ..... dry
Swafford, Prairie Oil & Gas Co. 1 90
Weeb, Prairie Oil & Gas Co. 1 17
Miller, Shaw et al 10 80
Swafford, Roxana Pet. Corp. 1 40
Bennett-Booth, Navarro Oil Co. 5 50
Miller, Shaw et al 9 10

Wells completed 13
Production 535
Dry 4

COLEMAN COUNTY

Norwood, Harris & Mitchell 1 ..... dry
Gray, Section 174, Urban 1 ..... dry
Harris, Illsing Prod. Co. 2 ..... gas
Cole, Hoffman Oil Co. 1 ..... dry
Crump, National Ref. Co. 1 ..... dry
Vaughn, Hodge & Baker 1 ..... dry
Haynes, Senior Pet. Co. 1 ..... dry
Moran, Shadbolt & Creighton 1 ..... dry
Goodwin, Forester et al 1 ..... dry
Coleman County School Land, Hart 1 .. dry
Overall-C, Cheney et al 1 50
Ward, Kenwood Oil Co. 1 ..... gas

Completions 12
Production 50
Gas wells 2
Gas production 13,000,000
Dry holes 9

CLAY COUNTY

Sanzenbacher, O. H. Foster 1 ..... dry
Stine Estate, Ashcraft et al 1 ..... dry

Completions 2
Dry holes 2

COOKE COUNTY

Waterschied, Carey et al 1 40
Public Park, Gray et al 4 84
Koelzer, Lynch-Stahl et al 3-A 32
Koelzer, Lynch-Stahl et al 5 78
Grotte, United Producers Co. 1 ..... dry
Dalton, J. R. Abernathy ..... dry
Koelzer, Bell Oil Corp. 2 54
Stelzer, Moorefield et al 2 4
Esker, Neff & Knox 1 ..... dry
Hofbauer, Oil Oper. Trust Co. 1 ..... dry
Hacker, Sun Oil Co. 5 55
Jones, Duggan et al 1 ..... dry
Andress et al, Magnolia Pet. Co. 2 .. gas
Koelzer, Oil Oper. Trust Co. 4 51
Ben Luke, Oil Oper. Trust Co. 2 50
Schmitz, Sowell Brothers 2 8
Hacker, The Texas Company 2 35
Koelzer, Bell Oil Corp. 3 ..... junked
Kleiss, Camp-Heydrick & Oil Operators Trust Co. 2 35
Hyman, J. W. Hoover 2 ..... dry
Koelzer, Miller Drilling Co. 1 ..... dry

Completions 21
Production 526
Gas wells 1
Gas production 500,000
Dry holes 8

EASTLAND COUNTY

Parsons, Prairie Oil & Gas Co. 3 312
Spencer, Cranfill & Reynolds 4 ..... dry
J. D. Parsons-A, Gulf Prod. Co. 5 328
Martin, Chestnut & Smith Corp. 1 .... dry
Fox, John W. Hoover 3 60
Harbin, Latchshaw et al 1 ..... gas
Sibley, States Oil Corp. 4 ..... dry
Sibley, Mook-Texas Oil Co. 6 35
McClelland, Adams et al 1 15
Pelfrey, Root 1 ..... dry
Sibley, Mook-Texas Oil Co. 7 ..... dry
Sibley, States Oil Corp. 3 80
Good, Belva Oil Co. 2 280
Cochran, Vacuum Oil Co. 1 ..... dry
Fox, Lewis, Trustee 1 8

Completions 15
Production 1918
Gas wells 1
Gas production 10,000,000
Dry holes 6

Ball, Foster & Erwine 1 ..... dry
Sloan, Madden & Hunt 3 8
Moore, L. M. Lamar 3 ..... dry
Richards & Lanier, Tedford Bros. 10
Richards & Lanier, Tedford Brothers 2 12
Sloan, Madden & Hunt 2 10
Mary Brown, Lewis & Bland 1 ..... dry
Williams, Buttram Pet. Co. 1 ..... dry
Gaskin, Buttram Pet. Co. 1 ..... dry
Bowen, A. C. Parks 1 ..... dry
Keyser, Reed & Neeley 1 ..... dry
Maxey, Craig-Lowrie & Walton 1 .... dry
Sloan, Madden & Hunt 1 ..... dry
Hodge, The Texas Dev. Co. 1 ..... dry
Jones Estate, Buttram Pet. Co. 2 140
Ira Coats, Chandler et al 1 ..... dry
Ira Coats, Craig-Lowrie & Walton 1 .. 15
Cullers et al, Shaw & Rathke 2 150
Richards & Lanier, Tedford Brothers 3 10

Completions 19
Production 355
Dry holes 11

KNOX COUNTY

Bowden, The Texas Company 1 ..... dry
Teague, The Texas Company 1 ..... dry

Completions 2
Dry holes 2

MONTAGUE COUNTY

Jones, Continental Oil Co. 8 ..... gas
Loy et al-A, Continental Oil Co. 1 .... dry
S. F. Loy et al, Gulf Prod. Co. 1 10
McGaughy, Bridwell-Heydrick et al 3 .. 96
Hinton, Humble Oil & Refining Co. 1 .. 80

Completions 5
Production 186
Gas wells 1
Gas production 17,000,000
Dry holes 1

McCULLOCH COUNTY

Zelle Estate, Way et al 1 ..... dry
Smith, McClung et al 1 ..... dry
Williamson, Wagley et al 1 ..... dry

Completions 3
Dry holes 3

PALO PINTO COUNTY

Strawn Coal Co., Burton-McKee Oil Corp. 5 ..... gas
Byer, Panhandle Refining Co. 1 .... dry
Gilbert, Shaw et al 2 ..... dry
Sheppard, McGinley et al 1 ..... dry

Completions 4
Gas wells 1
Gas production 1,000,000
Dry holes 3

SHACKELFORD COUNTY

Elliott, Sarver et al 1 ..... dry
Smalley, Overlees 1 ..... dry
Webb, Reynolds et al 1 ..... dry
Nail, Sinclair Oil & Gas Co. 4 ..... dry

Completions 4
Dry holes 4

STEPHENS COUNTY

Ledbetter, Livingston & Wellman 1 .. gas
Lipe, Texas Fidelity Oil Co. 1 ..... dry
Tipton, Paynes 1 ..... dry

Completions 3
Gas wells 1
Gas production 6,000,000
Dry holes 2

THROCKMORTON COUNTY

Kirk Ledbetter, Humble O. & R. Co. 1 dry
Matthews, Moore et al 1 ..... dry
Matthews, Hoffer Oil Corp. 4 15

Completions 3
Production 15
Dry holes 2

WICHITA COUNTY

W. T. Waggoner, The Texas Co. 331 .. 31
W. T. Waggoner-A, Magnolia Pet. Co. 2 dry
Frank I.-A, Sheldon et al 6 60
Ancell-A, Verschoyle & Vaughn 1 80
Burnett, W. C. Wallace 3 ..... dry
Daume, Wolfe Trustee 6 40
Ferguson, W. J. Grisham 1 ..... dry
Nitschke, Duncan & White 3 12
H. Reilly, Magnolia Pet. Co. 135 65

Completions 9
Production 288
Dry holes 3

WILBARGER COUNTY

W. T. Waggoner-JJ, Phillips Pet. Co. 6 41
W. T. Waggoner-B, Milham Corp. 14.. 31
W. T. Waggoner-PP, Phillips Pet. Co. 2 25
W. T. Waggoner-B, Waggoner Ref. Co. 3 40
Waggoner-B, Consolidated Oil Co. & J. S. Cosden 1 ..... dry
Waggoner-C, Waggoner Ref. Co. 2 40

Completions 6
Production 177
Dry holes 1

WISE COUNTY

Fred Milligan, Orbit Oil Co. 1 ..... dry

Completions 1
Dry holes 1

YOUNG COUNTY

Campbell, Continental Oil Co. & Perkins-Cullum 1 ..... dry
Peters, Camp Oil & Gas Co. 1 4
Allen, Robert Oil Corp. 1 ..... dry
Rutherford, G. A. Gifford 1 ..... dry
Freeman, Goldsmith et al 1 ..... dry
Graham-B, Robert Oil Corp. 3 20
Scott, Coones & Hotchkiss 1 35
Whittenburg, Phillips Pet. Co. 3 50
Parkinson, Reed et al 1 ..... dry
Hamilton, Wichita Prod. Co. 1 ..... dry
Fee, E. C. Stovall 5 60
Fee, E. C. Stovall 7 30

Completions 12
Production 139
Dry holes 6

WEST TEXAS COMPLETIONS FOR OCTOBER, 1927
CRANE COUNTY

State-Lasseter, Prairie Oil & Gas Co. 4..4800
University-F, Tidal Oil Co. 7 650

University-I, Tidal Oil Co. 3 4000
J. T. McElroy, Gulf Prod. Co. 37 1440
J. T. McElroy, Gulf Pro. Co. 39 1080
University-F, Tidal Oil Co. 3 650
State Land, Landreth Prod. Corp. 15 .. 240
J. T. McElroy, Gulf Prod. Co. 41..... 860
University-B, Independent Oil & Gas Co. 1 1360
State-Lasseter, Prairie O. & G. Co. 3 ..9000
University-D, Simms & Atlantic 4 1020
University-I, Tidal Oil Co. 5 935

Completions 12
Production 26035

CROCKETT COUNTY

L. P. Powell-B, Humble O. & R. Co. 3 540
L. P. Powell, Taylor-Link Oil Co. 1 .. 500

Completions 2
Production 1040

DAWSON COUNTY

Wright, R. R. Penn et al 1 ..... dry

GLASSCOCK COUNTY

W. B. Currie, The California Co. 1 .... dry

HOWARD COUNTY

S. T. Eason, Henshaw et al 1..... dry
Dora Roberts, Harrison et al 2 45
Mary Chalk, Magnolia Pet. 7 42
Sloan Chalk, Magnolia Pet. 5 75
Chalk-A, Marland Oil 5 ..... dry
M. O. Quinn, Texon-Marland 1 ..... dry
Mary Chalk, Magnolia Pet. 6 87

Completions 7
Production 249
Dry holes 3

LOVING COUNTY

J. O. Moore ..... dry

JONES COUNTY

E. Howell, Marston Oil 1 ..... dry

MITCHELL COUNTY

W. F. Sanders, Tex-O-Kan Oil and Robert Thraves 1 ..... dry
C. M. Adams, Lease 2, California Co. 6. 81

Completions 2
Production 81
Dry holes 1

NOLAN COUNTY

W. L. Booth, John W. Winemiller Corp. 1 ..... dry

PECOS COUNTY

M. A. Smith et al, Gulf Prod. Co. 1....1680
M. A. Smith, Simms Oil 1.....2530
I. G. Yates, McMan O. & G. and Marland Oil 3 1440
I. G. Yates, McMan O. & G. and Marland Oil 4 1680
J. H. Tippett, Roxana Pet. 1 4872
M. A. Smith, California Co. 1 12,000

Completions 6
Production 24,202

RUNNELS COUNTY

R. M. McMillian, Lou Ladd and C. E. Sillix et al 1 200

TOM GREEN COUNTY

Jacobs, Dullahan et al 1 ..... dry

UPTON COUNTY

University, Marland Oil and L. Smith 1 dry
J. F. Lane, Gulf Prod. Co. 5 240
J. F. Lane, Champlin O. & R. 1.....3456
A. S. Burleson, Tidal Oil 2 10

Completions 4
Production 3706
Dry holes 1

VAL VERDE COUNTY

Sellars, Hiawatha Oil 1 .....dry

WINKLER COUNTY

Grisham-Hunter, Murchison Oil et al 1.1898
Grisham-Hunter, Landreth Prod. Corp. 1 1560

Completions 2
Production 3458

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ARCHER COUNTY

Rigs

L. F. Wilson, Atlantic Oil Producing Co. 6.
Parrish, Burton et al 1.
J. H. White, Koll-Tex Oil Co. 7.
Perkins et al, C. B. Long et al 3.
Farmer-B, Burton et al 2.
Young, M. Franklin 1.
Whittaker, Hines et al 1.
Colgin, Panhandle Refining Co. 1.

Wells Drilling

Kemp & Bell, W. Hammon et al 3-A.
Kemp & Kempner, W. Hammon et al 1.
Netherton, Consolidated Oil Co. & Continental Oil Co. 4.
S. M. Gose, Continental Oil Co. 60.
L. F. Wilson, Navarro Oil Co. 3.
Donnell, Clark et al 1.
Crawford, Consolidated Oil Co. & The Texas Company. 1.
Farmer, W. J. Grisham 1.
Farmer, Hines & The Texas Company 1.
Garvey, Hines & The Texas Company 1.
Andrews-C, Jeffers & Jeffers 1.
Seay, Maer & Staniforth 1.
Wilson Estate, Manninger et al 1.
Helm, Panhandle Refining Co. 1.
Garvey, Robert Oil Corp. 2.

Shut Down

Brown, Hart et al 1.
Allen, Stidham & Thrasher 1.
Rigs, 8; wells drilling, 15; wells shut down, 2; total, 25.

BROWN COUNTY

Rigs

Ellsberry, Canyon Oil & Gas Co. 6.
M. L. Smith, Cranfill & Reynolds 12, 13, 14, 15.
Baugh, Gilman & McMurray 1.
Stone, Moellendick 5.
McGhee, Pitts et al 1.
M. L. Smith, Sinclair Oil & Gas Co. 9.

Wells Drilling

J. Gilbreath, Amerada Pet. Corp. 1.
King, Cameron et al 1.
M. L. Smith, Cranfill & Reynolds 9, 10.
Marr, Curtis & Pandem Oil Corp. 1.
George, Daniels et al 1.
Moore, Forest Oil Co. 3.
Gilbreath-A, J. K. Hughes Dev. Co. 2.
Armstrong, Humble Oil & Refining Co. 11, 12.
J. Gilbreath, Humble Oil & Refining Co. 3, 4, 5.
Hickman, Humble Oil & Refining Co. 22, 23.
Hickman, Kone Production Co. 6, 7.
Keeler, Mitcham 1.
Nixon, Osage Oil Corp. 1.
Newsome, Phillips Petroleum Co. 3, 5, 6
Scott, Rex-Tex-Fy-Tex Oil Co. 1.
Spencer, Ross Drilling Co. 1.
M. L. Smith, Roxana Pet. Corp. 16.
M. L. Smith, Sinclair Oil & Gas Co. 8.
Moore, E. L. Smith Oil Co. 2.
M. L. Smith, E. L. Smith Oil Co. 5, 9, 19.
Graham Estate, Stock & Love 1.
Wooldridge, Veale et al 9.
Lewis, Vondran et al 2.
Richardson, Bush & Spinney 1.
Carter, Choate Interests 1.
Hooper, Gold et al 1.
King, Golden Rod Oil Co. 2.
Taylor, Golden Ril Oil Co. 1.
Earp, Shell 1.
Evans, Van Bibber & Lehman 1.
Looper, Warren Development Co. 2.

Shut Down

Looper, Bowers 1.
Boler, Ditto Oil Interests 1.
Armstrong, Lent Brothers 1.
Mills, Peck et al 1.
Earl, Russell 1.
Turner, Russell 1.
Newton, West & H-Y Oil Co. 22.
Matlock, Campbell 1.
Bettis heirs, Ditto Oil Interests 1.
F. A. Brownwood, Elams et al 1.
Beasley, Humphreys Brothers 1.
Low, Kellar 1.
McClatchey, Kellar 1.
Coggins estate, Lake Petroleum Co. 1.
McDaniels, Randall et al 1.
Ratliff, Warner Development Co. 1.
Rigs, 9; wells drilling, 41; wells shut down, 16; total, 66.

CALLAHAN COUNTY

Rigs

Mayfield, English 1.
Cutbirth, Morgan et al 1.
Wylie, Parks & Bell 1.

Wells Drilling

Windham, Branch Brothers 1.
Edwards, Brown & Company 3.
Hall, Humble Oil & Refining Co. 1.
Pate, Jones Oil Syndicate 1.
Jackson, Martin 1.
Baum, Mook-Texas Oil Co. 2.
Harris, Moore & Barbee 1.
Baum, Prairie Oil & Gas Co. 2. 5
Ferguson, Sanger Oil Co. 1.
Arrell, Skelly Oil Co. 1.
Hatchett, Sterling Oil Co. 1.

Shut Down

Beck, Denny & Andrews 1.
Sealy & Smith, Empire Gas & Fuel Co. 1.
Powell, Frost & Ross 1.
Radford, Kelly et al 1.
Johnson, Manhattan Oil Co. 1.
Moore, Ross Petroleum Co. 1.
McWhorter, Seaboard Oil & Gas Co. 1.
Hall, Shadbolt & Creighton 1.
Rigs, 3; wells drilling, 12; wells shut down, 8; total, 23.

COLEMAN COUNTY

Rigs

Breneke, Ross Drilling Co. et al 1.
Pearson, Simms et al 1.
Hunter, Bescut & Sullivan 1.
Rae, Bucher & Ertel 1.
Williamson, Philmack Oil Co. et al 1
Ward, Kenwood Oil Co. 2.

Wells Drilling

Harris, English et al 1.
Morris, Magnolia Petroleum Co. 19.
Morris, Midwest Exploration Co. 2.
Sealey & Smith, Roth & Faurot 2.
Green, The Texas Company 1.
Hassard, Tower & McKanna Inc. 1.
Fender, Allison 1.
Jennings, Cunningham 1.
Cameron, Hoffer Oil Corp. 2.
McClure, Ingleright et al 1.
Henderson, Lee & Daniels 1.
Sealey & Smith, Peer Oil Corp. 1.
Hale, Scarborough 1.

Shut Down

Parker, Carter 1.
Stevens, Choate Interests 1.
Crawford, English et al 1.
Mullanax, McIntyre et al 1.
Johnson, Candenhead & Andrews 1.
Robertson, Corsicana Oil & Refining Co. 1.
Kingsberry, Delta Oil Co. 1.
Martin, Dixon & Mitcham 1.
Beck, Gracey 1.
Lancaster, Locke & Nokes 1.
Standridge, Roscoe et al 1.
Wells, Van Eman et al 2.
Rigs, 6; wells drilling, 13; wells shut down, 12; total, 31.

COOKE COUNTY

Rigs

L. Campbell, Green-Perkins & Skelly Oil Co. 1.
Koelzer, Miller Drilling Co. et al 2.
Midkiff, Nelson Holding Co. 1.
Dennis, Powell Oil Co. 1.
Koelzer-A, Stroube & Stroube 6.
Hacker, The Texas Company 3.

Wells Drilling

Mayer, Camp-Heydrick and Oil Operators Trust Co. 1.
Kelly, Chronic et al 1.
Koelzer, Continental Oil Co. 1.
Harris, Fain-McGaha Oil Corp. 1.
Dennis-B, Kewanee Oil & Gas Co. 2.
Houston, Simpson et al 1.
Harris, Stoneman et al 1.
Beckleman, Vacuum Oil Co. 1.

Shut Down

Harris-A, Danciger Oil & Refining Co. 1.
Lewis, P. R. Harris 1.
Wilson, Hoffer Oil Corp. 1.
Cox, Houseman et al 1.
Walterschied, Houseman & Lawson 1.
Harris estate, Murchison Oil Co. 1.
Kleiss, Oil Operators Trust Co. 8.
Rigs, 6; wells drilling, 8; wells shut down, 7; total, 21.

EASTLAND COUNTY

Rigs

Elliott, Corzelius et al 1.
Sibley, Mook-Texas Oil Co. 5.
Webb, Panhandle Refining Co. 4.
Bourland, Teatsorth et al 1.
Stewart, Hoffman 1.
Poe, Hoffman 2.
Barnett, Milham Corp. 2.
Castleberry, Murray et al 1.
Weddington, Riley et al 1.

Wells Drilling

Gullet, Atwood 1.
Duffer, Barkley et al 1.
Wright, Eastland Oil Co. 3-A.
Powell, Gohlson et al 1.
Parsons-A, Gulf Production Co. 9.
Fox, J. W. Hooser 3, 4.
Hargus, Lewis et al 4.
Casey, Mook-Texas Oil Co. 3.
Sibley, Mook-Texas Co. 8.
Fox, Panhandle Refining Co. 3.
Hargus, Teatsorth et al 2.
Hightower, The Texas Company 19.
Grove, Adams et al 4.
Luse, Associated Petroleum Co. 2.
Good, Belva Oil Co. 1.
Griggs, Chestnut & Smith Corp. 1.
Ward, Gilman & Simmons 1.
Thompson, Livingston & Wellman 1.
Qualls, Lorenzen 1.
Barnett, Lowe, Delaney & Carter 2.
Thorp, McLester Oil Co. et al 3, 4.
Barnett, Milham Corp. 1.
Dyer, Moody et al 2.
Thorp et al, Moorman et al 1.
McFall, Prairie Oil & Gas Co. 1.
Ray, Root et al 3.
Watson, Root et al 3.
Dillon, T. P. Coal & Oil Co. 1.

Shut Down

Nix, Adams et al 1.
Clemmer, Allworth 1.
Moats, Kokomo Petroleum Co. 1.
Johnson, Lewis et al 2.
Hightower, The Texas Company 18.
Poe, Hoffman 1.
Morgan, Independent Oil & Gas Co. 3.
Poe, Independent Oil & Gas Co. et al 1.
Chesley, Thomas & Reynolds 1.
Ramsower, West Adams Pet. Corp. 3.
Rigs, 9; wells drilling, 30; wells shut down, 10; total, 49.

JACK COUNTY

Rigs

Green, Wilson-Clay Oil Co. 1.
Jones estate, Buttram Petroleum Co. 4.
Jones estate, Christie Bros. 2.
Ira Coats, Craig-Lowrie & Walton 3.
Walker, S. E. J. Cox 1.
First National Bank of Bryson, Lydecker et al 1.
Cherryholmes, Marland & Zoch 1.
McCaslin, Mitchell & Spoontz 1.
Jones estate, Buttram Pet. Co. 2.
Ira Coats, Craig-Lowrie & Walton 2.
Voyles, S. E. J. Cox 1.
Fee, Holman heirs 3.
Sloan, Madden & Hunt 4.
Brentmore, Inc., Mahistedt-Mook Oil Co. 1.
Richards & Lanier, Tedford Brothers 4.
Williams Bros., Witchern O. & G. Co. 1.

Shut Down

Johnson, Fletcher Royalty & Drilling Co. 1.
McClure, Buttram Petroleum Co. 1.
Gray, Rochelle et al 1.
Rigs, 6; wells drilling, 10; wells shut down, 3; total, 19.

MONTAGUE COUNTY

Rigs

Salmon-A, Bridwell & Heydrick 2.
Maddox, Skinner et al 3.
Hinton, The Texas Company 3.
Maddox-B, The Texas Company 5.

Wells Drilling

Brown, Bridwell-Heydrick & Continental Oil Co. 1.
Salmon-A, Bridwell & Heydrick 1.
Roper, R. W. Little Co. 1.
Cobb, Pace et al 1.
Maddox, Sigler et al 3.
Bybee, Chapman et al 1.
Ditto, Dickey et al 1.
Steadman, McGinley Oil Corp. 1.
Barclay, Washington Oil Corp. 1.

Shut Down

Hodge, Baker & McClure 1.
Parr, Chambers & Anchor 1.
Heaton et al, Walton et al 1.
Field, Burns & Farris 1.
Williams, Dickey et al 2.
Tinney et al, Yates & Cumley 1.
Rigs, 4; wells drilling, 9; wells shut down, 6; total, 19.

PALO PINTO COUNTY

Rigs

Hart, Chestnut & Smith Corp. 1.
Stuart, T. P. Coal & Oil Co. 155.

Wells Drilling

Taylor, French et al 1.
Wharton, Upham 1.
Lane, Dixie Drilling Co. 1.
Seaman, Dixie Drilling Co. 1.
Perkins, Hughes et al 1.
Costello, Mountain Oil Co. 1.
Slemmons, Ponder Production Co. 2.
Edgin, Richardson & Dalton 1.

Shut Down

Dalton, Dalton Oil Co. 7.
Humphries, DeWitt et al 1.
Morgan, Orbit Drilling Co. 1.
Hinkson, McGinley et al 1.
Hitson, Panhandle Refining Co. 1.
Rasmussen, Pender Production Co. 2.
Weldon, Reinhart Brothers 1.
Rigs, 2; wells drilling, 8; wells shut down, 7; total, 17.

SHACKELFORD COUNTY

Rigs

McLemore, Harris et al 2.

Wells Drilling

King, Evans et al 1.
Reynolds, Hope Petroleum Co. 1.
Davis, Humble Oil & Refining Co. 3.
Sedwick, Milham Corp. 5.
Ackers, Simmons 1.
Nail, Sinclair Oil & Gas Co. 3.
Hammond, Smart 1.
Russ-Webb, Texas Unity Oil Co. 1.

Shut Down

Barkley, Abbott 1.
McKelvey, Bridwell & Heydrick 2.
Poindexter, Dover 1.
Matthews, Earl & Dull 2.
Huskey, Merry Brothers & Perini 1.
Fukussahima, Milham Corp. 1.
Jenkins, Waddington & House 1.
Rigs, 1; wells drilling, 8; wells shut down, 7; total, 16.

STEPHENS COUNTY

Rigs

Ledbetter, Beatty et al 1.
Riddle, Clark, 2, 3.
Langford, McKinnon et al 1.
Riddle et al, Mook-Texas Oil Co. 4.
Houston, The Texas Company 4.

Wells Drilling

Cunningham, Gardner Brothers & Collins 3.
Proctor, Prairie Oil & Gas Co. 2.
Robinson, Red Bank Oil Co. 1.
Knox, Republic Production Co. 7.
Martin, Texas Cons. Oil Co. 10.
Todd, Hanion Gasoline Co. 1.
Thorp, McLester Oil Co. 1.
Pierce, T. P. Coal & Oil Co. 5.
Works, T. P. Coal & Oil Co. 2.

Shut Down

Hamil, Hickok Producing Co. 1.
Keel, Pender Production Co. 6.
Downing, Christmas et al 1.
Tomlinson, Garrett & Moore 1.
Litton, Hatcher et al 1.
Curry, Lyman et al 1.
Mitchell, McGinley et al 2.
Riddle et al, Mook-Texas Oil Co. 3.
Rigs, 6; wells drilling, 9; wells shut down, 8; total, 23.

THROCKMORTON COUNTY

Rigs

Graham, Reiter-Foster Oil Corp. 5.
Upshur County Sch. land, Bridwell-Heydrick and Hickman 1.

Wells Drilling

Stacey, Associated Petroleum Co. 2.
Cole, Red Bank Oil Co. 1.
Cummings, Associated Petroleum Co. 4.
Matthews, Humble Oil & Refining Co. 1.
Matthews, Parker et al 3.

Shut Down

Buchanan, Associated Petroleum Co. 1.
Matthews, Overlees 2.
Rigs, 2; wells drilling, 5; wells shut down, 2; total, 9.

WICHITA COUNTY

Rigs

Crudup, W. M. Moore 2.
State Land, Hines & Staley-Wynne 5.
McCarty, Lease No. 2, Lanning et al 3.
Burnett-B, Moore 1.
Kemp & Kemper, Petroleum Producers Co. 1.
Honaker, Sheldon et al 2.
W. T. Waggoner, The Texas Company 334

Wells Drilling

Schnackenberg, A. A. Rollstone 1.
B. H. Preston, Simms Oil Co. et al 1.
Dutton, Birk et al 1.
American Refining Co., Duncan & White 1
Chilson-A, Humble Oil & Refining Co. 2
Honaker, Clark et al 4.
Goetze, Cline 1.
Watkins, Electra-Gulf Oil Co. 8.
Watkins, Hobbs 1.
Hirschl, Howell & Somers et al 1.
Kemp & Kemper, O'Neil et al 1.
James, Rayzor et al 1.
Honaker, The Texas Company 66.
W. T. Waggoner, The Texas Company, 330, 333, 335, 336.

Shut Down

Reis, Bradford 1.
Cooper, Everets 1.
Ramming-B, Magnolia Petroleum Co. 26.
Rigs, 7; wells drilling, 17; wells shut down, 3; total, 27.

WILBARGER COUNTY

Rigs

Fluhman-A, Atlantic Oil Producing Co. 2.
Waggoner-C, Consolidated Oil Co. and J. S Cosden 1.
Waggoner-B, Milham Corp. 17.
Waggoner-A, Prairie Oil & Gas Co. 7.
Castleberry-B, The Texas Company 2.

Wells Drilling

Waggoner, Golding-Cochran & Marland Oil Co. 1.
F. Fluhman, Gulf Producing Co. 1.
Castleberry-A, Humble Oil & Refining Co. 1.
Lutz, North Vernon Oil Co. 1.
Waggoner-JJ, Phillips Petroleum Co. 7-A
Waggoner, Section 9, Staley-Wynne & Co. 1.
Waggoner, Sloan 2.
Waggoner, Smith & Brady 1.
Waggoner-B, The Texas Company 1.
Waggoner-B, Waggoner Refining Co. 4
Waggoner-C, Waggoner Refining Co. 3.

Shut Down

Fluhman, Fain-McGaha Oil Corp. et al 10.
Zipperle, Keltz 2.
Guyer, McLaughlin Brothers 1.
Waggoner-B, Milham Corp. 12.
Rigs, 5; wells drilling, 11; wells shut down, 4; total, 20.

YOUNG COUNTY

Rigs

Keen, Atlantic Oil Producing Co. 2.
Howell, Clark et al 1.
Stewart, Carter-Fine & Carter 1.
Leberman, Reed & Anderson 2.
Willard, F. E. Rose 1.
Ford, Atkinson & Sandefer 3-A.
Thornton, Bert Brookins 1.
Parkinson, Coones & Hotchkiss 1.
Hinson, Lucas et al 1.
Hinson, Nash & Windfohr 1.
Morrison Co., Pitzer & West 4, 5.
Ford, Roxana Petroleum Corp. 13.
Thedford, Shaw & Rathke 1.

Wells Drilling

Campbell, The Texas Company 1.
McCluskey, Connor et al 4, 10.
Jones, J. S. Cosden 1.
State Land, Eureka Production Co. 7.
Driver, G. A. Foster 1.
Neville Graham, Godley Oil Co. 15.
Criswell, Hines & Whatley 1.
Weldon, Jacob Oil & Gas Co. 1.
Graham, Lindsey Drilling Co. 2.
State Land, Lyman et al 1.
Boozer, Nance & Lucas 3.
McCluskey, Panhandle Refining Co. 17, 21.
Donnell, Pardee et al 1.
Morrison Co.-B, Pitzer & West 2.
Ford, Roxana Petroleum Corp. 12.
Stovall, Ruthada Oil Co. 2.
Graham, Seaboard Oil & Gas Co. 10.
Ribble, Simms Oil Co. 1.
Fee, E. C. Stovall 3.
Donnell, Sun Oil Co. 6.
Stinson et al, T. P. Coal & Oil Co. 1.
Thompson, United Royalty Corp. 1.
Wallace, United Royalty Corp. 1.
Graham-B, Westerfelt & Noble 8.
T. L. Lisle, Gulf Production Co. 6.

Shur Down

Donnell, Atkinson & Sanderfer 2.
Ford, Atkinson & Sanderfer 4.
Graham, Canyon O. & G. Co. 1.
Sayers, Jacob Oil & Gas Co. 1.
Bower, McCoy et al 1.
Donnell, Painter et al 1.
Stovall, Ruthada Oil Co. 5.
Rigs, 14; wells drilling, 27; wells shut down, 7; total, 48.

WEST TEXAS DRILLING

CRANE COUNTY

Rigs

University, Humble O. & R. 13.
University-A, Independent O. & G. 3, 4, 5.
State-Lasseter, Magnolia Pet. 3.
University, Magnolia Pet. and Hardwick 3, 13, 14, 15, 16.
University, Pecos Oil 13, 14.
State-Lasseter, Prairie O. & G. 7.
University-D, Simms and Atlantic 10.
University-G, Tidal Oil 11, 12.
State Banking Com., J. K. Hughes et al 1.

Wells Drilling

W. N. Waddell, Gulf Prod. 2.
J. T. McElroy, Gulf Prod. 42, 43, 44.
University, Humble O. & R. 12.
State Land, Landreth Pet. Corp. 16.
O'Keefe-University, Magnolia Pet. 11, 12.
University, Magnolia Pet. and Hardwick 12.
Uniop Land Co., Mariand Oil 1.
University, Pecos Oil 8, 9, 10.
State-Lasseter, Prairie O. & G. 5, 6.
University, Simms and Atlantic 8.
University-D, Simms and Atlantic 8, 9
University-I, Tidal Oil 4, 6, 7, 8.
Cowden Bros. & Co., Duffey & Gault Brown 1.

Shut Down

University, Magnolia Pet. and Hardwick, 10, 11.
Rigs, 16; wells drilling, 22; shut down, 2; total, 40.

CROCKETT COUNTY
Rigs
Paul Perner, J. S. Cosden, Inc., 1.
H. M. Huff, J. S. Kimborough 1.
B. C. Clark, Newman Oil 1.
Geo. Thompson, Van McPhail et al 1.
Geo. Thompson, Van McPhail 1.
Powell, World Oil 1.
Wells Drilling
Todd, Jas. Kelly et al 1.
University, Corbett & Gill 1.
Noelke, Epeneaur et al 1.
Noelke-Murphy, Geo. Henshaw 1.
Powell, C. A. Jones et al 1.
L. P. Powell-D, Gulf Prod. Co. 2.
G. L. Thompson et al, Gulf Prod. Co. 2.
University, W. M. Schaffer et al 2.
L. P. Powell, Cushing R. & G. 2.
R. Massie, Young & Donnelly 1.
J. M. Shannon, Young & Donnelly 1.
Blakeney, McManmon Oil 1.
Shut Down
University, Geo. Anderson and Marland Oil Co. 1.
University, W. M. Schaffer et al 1.
Schneman-B, World Oil 1.
P. C. Coates, V. T. Bolin & Co. 1.
J. S. Pierce, Marland Oil and H. Wallace 1.
Rigs, 6; wells drilling, 12; shut down, 5; total, 23.

HOWARD COUNTY
Rigs
G. O. Chalk, Magnolia Pet. 8.
A. Richardson, Marland Oil 1.
W. J. Flowers, Mays, Nixon & Flowers 1.
C. D. Read, Miley and Marland Oil 1.
Wells Drilling
Martin, Donnelee et al 1.
Dora Roberts, Harrison et al 3.
W. R. Settles, Henshaw et al 1.
Kelly Chalk, Magnolia Pet. 2, 7, 8.
Mary Chalk Magnolia Pet. 8.
Sarah Hyman, Magnolia Pet. 3.
John Roberts, Magnolia Pet. 1.
H. R. Clay-E, Marland Oil 1.
Fisher, Marland Oil 1.
Guitar Trust est., Marland Oil 1-A.
A. G. Haines, Marland Oil 1.
C. D. Read, Peer Oil Corp. 1.
Chalk, Sweeney et al 1.
Mrs. Connally, Texon-Marland 1.
W. R. Settles-A, Texon-Marland 1.
Fisher Bros., California Co. 1.
Shut Down
Jones, Bowers et al 1.
Dora Roberts-B, F. H. E. Oil et al 1.
W. R. Settles, Texon-Marland 2.
H. R. Clay, Vitex Oil 1.
Rigs, 4; wells drilling, 18; shut down, 4; total, 26.

JONES COUNTY
Rigs
Joe Winters, Phillips Pet. 3.
Higgs, Stebbins O.l 2.
Wells Drilling
Ed Glynn, Garland & Diamond 1.
Smith, Hutson & Weaver 1-A.
Scott, Stebbins Oil 1.
J. C. Mason, Phillips Pet. 2.
W. C. Bennett, Stough et al 1.
Canton, Swensondale Oil 1.
Shut Down
L. H. Herndon, Campbell et al 1.
Joe Dillard, Gibson & Johnson 1.
J. S. Swann, Marston Oil 1.
J. P. Willis, Stough et al 1.
Rigs, 2; wells drilling, 6; shut down, 4; total, 12.

MITCHELL COUNTY
Rigs
C. M. Adams, Lease No. 2, California Co. 7.
Shut Down
C. Way, Robert Thraven 1.
J. E. Dollen, B. E. Walter et al 1.
Rigs, 1; shut down, 2; total, 3.

PECOS COUNTY
Rigs
Sherbino Bros., Geo. Anderson 1.
Pecos River Bed, Allsman & Bell 4.
Blackstone & Slaughter, Cummings et al 1.
M. A. Smith et al, Gulf Prod. Co. 2.
I. G. Yates, Gulf Prod. Co. 1, 2, 3.
Mrs. M. A. Smith, Mazda O. & G. Corp. and Savoy Oil Co. 2.
Blackstone & Slaughter, Diamond Pet. 1.
: T. Conder, Geo. Henshaw et al 1.
Mrs. M. A. Smith-B, Humble O. & R. 1.
Mrs. M. A. Smith, Humble O. & R. 3.
Cannon, Kershaw & Livingston 1.
I. G. Yates, McMan O. & G. and Marland Oil 7, 8, 9, 10.
I. G. Yates-A, Marland Oil 4.
Smith-Taylor, Mid-Kansas O. & G. 3, 4.
I. G. Yates-A, Mid-Kansas O. & G. 9.
I. G. Yates-B, Mid-Kansas O. & G. 7, 8, 9, 10, 11, 12.
I. G. Yates-C, Mid-Kansas O. & G. 2, 3, 4, 5.
B. T. Corder, Moody Oil Corp. 1.
Arthur Harral, Olean Pet. Co. 1.
Sherbino Bros., Olean Pet. Co. 1.
Arthur Harral, Red Bank Oil 1.
J. H. Tippett, Roxana Pet. 2.
I. G. Yates, Texon O. & L. Co. 3.
I. G. Yates, California Co. 2, 6, 7, 8.
Mrs. M. A. Smith, California Co. 3.
M. Serf, World Oil Co. 1.
A. Kloh, World Oil Co. 1.
Wells Drilling
McKenzie, Geo. Anderson et al 1.
Pecos River Bed, Allsman & Bell 3.
Jasper County Sch. land, Buell & Hagen 1.
I. G. Yates, Day Bros. & McKnight 1.
El Paso Loan Co., Garland & Mott 1.
Mrs. M. A. Smith, Humble O. & R. 1, 2.
I. G. Yates, McMan O. & G. and Marland Oil 2, 5, 6.
I. G. Yates-A, Marland Oil 2, 3.
Mrs. M. A. Smith, Mazda O. & G. and Savoy Oil 1.
Smith-Taylor, Mid-Kansas O. & G. 2.
Mrs. M. A. Smith, Mid-Kansas O. & G. 1.
I. G. Yates-A, Mid-Kansas O. & G. 8.
I G.. Yates-B, Mid-Kansas O. & G. 4, 5, 6.
I. G. Yates-D, Mid-Kansas O. & G. 1.
G. A. Harrel, Olean Pet. 1.
McKenzie, Red Bank Oil 1.
Mrs. M. A. Smith-A, Roxana Pet. 1.
M. A. Smith, Simms Oil 2.
I. G. Yates, California Co. 3, 4, 5.
Blackstone & Slaughter, Transcontinetal Oil 1.
Schimmel, Geo. A. Henshaw 1.
W. W. Turney, Kirby Pet. Co. 1.
A. J. Devlin, Simms Oil 2.
Shut Down
J. T. Sellman, Douglas Oil 1.
Holmes, Bob Elmore 1.
I. G. Yates, W. R. Shankel et al 1.
Mrs. M. A. Smith, California Co. 2.
J. C. Trees, Benedum & Trees 1.
W. W. Batcheler, Buell et al 1.
Bonebrake, M. C. Dibble et al 1.
Bennett, Quinby et al 1.
A. A. Gray, Quinby et al 1.
Townsite, Quinby et al 1.
Rigs, 44; wells drilling, 31; shut down, 10; total, 85.

REAGAN COUNTY
Rigs
University, Big Lake Oil 132, 133, 135, 136.
University, Skelly Oil 1.
Shofner & Sterling, White et al 1.
Well Drilling
University, Big Lake Oil Co. 126, 130.
Shut Down
University, Big Lake Oil 110, 124, 125, 127, 128, 129, 131, 134.
University, Group 1, Texon O. & L. 61.
University-B, Group 1, Texon O. & L. 1.
University, Henshaw & Camp 1.
Rigs, 6; wells drilling, 2; shut down, 11; total, 19.

UPTON COUNTY
Rigs
Lane, Champlin O. & R. 2.
Union Land Co., Eastland Oil, Brandon & McCamey 1.
K. C. M. & O. right of way, R. H. Paxton 2, 3, 4, 5, 6.
Bowen, Roxana Pet. Corp. 27.
J. M. Perry, The Texas Company 4.
Union Land Co., The Texas Company and Cordova Union Co. 1.
Wells Drilling
W. I. Gormley, J. M. Hickey 1.
R. Ricker, Humble O. & R. 7.
K. C. M. & O. right of way, R. H. Paxton 1.
A. S. Burleson, T. P. C. & O. Co. 1.
Shut Down
D. C. Giddings, L. E. Hultz et al 2.
Benton Land Co., Marland Oil 3.
A. S. Burleson, Marland Oil 34.
Estep, Marland Oil 11.
J. H. Porter, Wise & Jackson 1.
Rigs, 10; wells drilling, 4; shut down, 5; total, 19.

WINKLER COUNTY
Rigs
Ida Hendrick-D, Atlantic Oil Prod. 1.
Grisham-Hunter-E, Atlantic Oil Prod. 1.
Grisham-Hunter-A, Cranfill & Reynolds 1.
Grisham-Hunter, Humble O. & R. 5.
Grisham-Hunter-B, Independent O. & G. 1.
Ida Hendrick-A, Landreth Prod. and Roxana Pet. 2, 3, 4.
T. G. Hendrick, Mining & Engineering 1.
Grisham-Hunter, Murchison Oil et al 2, 4.
Grisham-Hunter, Pure Oil 3.
Grisham-Hunter-B, Pure Oil 4.
Grisham-Hunter, Republic Prod. 2.
Ida Hendrick-B, Roxana Pet. 2.
Grisham-Hunter-D, Roxana Pet. 1.
Ida Hendrick, Sheldon & Burden 1.
Grisham-Hunter, 3-T-68-A, Southern Crude Oil Purchasing Co. 3.
Grisham-Hunter-A, Texon O. & L. Co. 3.
Wells Drilling
T. G. Hendrick, Gulf Prod. Co. 4.
J. B. Walton, Amerada Pet. Corp. 1.
Grisham-Hunter, Atlantic Oil Prod. Co. 2.
Ida Hendrick, Atlantic Oil Prod. Co. 1.
Grisham-Hunter-C, Atlantic Oil Prod. Co. 1.
Ida Hendrick, G. M. Church et al 1.
M. H. Bashara, Cranfill Bros. Oil Co. 1.
Ida Hendrick, Cranfill & Reynolds 1, 2.
Grisham-Hunter, Eastland Oil et al 1.
Grisham-Hunter, Humble O. & R. 1, 2, 3, 4.
T. G. Hendrick, Group 1, Humble O. & R. 1.
Grisham-Hunter, Independent O. & G. 1.
Grisham-Hunter, Landrth Prod. Corp. and Roxana Pet. Corp. 2.
Ida Hendrick-A, Landreth Prod. Corp. and Roxana Pet. Corp. 1.
Seth Campbell, Liner Drlg. Co. 1.
Grisham-Hunter, Marland Oil 2, 3.
Grisham-Hunter, Murchison Oil et al 3.
Grisham-Hunter-B, Murchison Oil et al 1.
Grisham-Hunter-B, Pure Oil 1, 3, 2.
Grisham-Hunter-A, Republic Prod. 1.
Grisham-Hunter-B, Republic Prod. 1.
Grisham-Hunter-A, Roxana Pet. Corp. 1.
Ida Hendrick-B, Roxana Pet. Corp. 1.
Grisham-Hunter-C, Roxana Pet. Corp. 1.
W. F. Scarborough, Roxana Pet. et al 1.
Grisham-Hunter, 3-T-68-A, Southern Crude Oil Purchasing Co. 1, 2.
Grisham-Hunter-F, 3-T-69-A, Southern Crude Oil Purchasing Co. 1.
Ida Hendrick, 3-T-67-A, Southern Crude Oil Purchasing Co. 1, 2.
Ida Hendrick, T-67-B, Southern Crude Oil Purchasing Co. 1.
Ida Hendrick, T-88-B, Southern Crude Oil Purchasing Co. 2.
Ida Hendrick, T-67-C, Southern Crude Oil Purchasing Co. 2, 4.
Ida Hendrick, T-88-C, Southern Crude Oil Purchasing Co. 1, 2.
Ida Hendrick, T-67-F, Southern Crude Oil Purchasing Co. 1.
Grisham-Hunter-A, Texon O. & L. 2.
Grisham-Hunter-E, Texon O. & L. 1.
J. W. Amburgey, Tidal Oil et al 1.
Ida Hendrick, Thurman et al 1.
H. E. Collins, White Eagle O. & R. 1.
Shut Down
Grisham-Hunter, Atlantic Oil Prod. Co. 1.
Grisham-Hunter, Humble O. & R. Co. 2.
T. G. Hendrick, Gulf Prod. Co. 3, 5, 6, 7.
Grisham-Hunter, Independent O. & G. 2.
Ida Hendrick-B, Independent O. & G. 1.
Cowden Cattle Co., R. S. Mathews 1.
Grisham-Hunter, Pure Oil Co. 2.
Grisham-Hunter-B, Texon O. & L. Co. 2.
Rigs, 21; wells drilling, 49; shut down, 12; total, 82.

MISCELLANEOUS NORTH CENTRAL TEXAS COUNTIES
CLAY COUNTY
Wells Drilling
Meyer, Hivick et al 1.
Miller, Lone Star Gas Co. 16.
Shut Down
Wetsel, H. R. Edwards 2.
Gault, Grubbs & Gill, 1-A.
Wells drilling, 2; wells shut down, 2; total, 4.

COLLINS COUNTY
Shut Down
Watkins, Verona Production Co. 1.

COMANCHE COUNTY
Rigs
Strickland, Carter et al 1.
Crump, Hoffer Oil Corp. 1.
Wells Drilling
Chapman, Swoveland et al 1.
Shut Down
Maxwell, Hickey et al 1.
Rasco, Hoffer Oil Corp. 1.
Barnes, Humphreys Brothers 1.
Strickland, Moore 1.
Barnes, Trojan Oil Co. 1.
Rigs, 2; wells drilling, 1; wells shut down, 5; total, 8.

DENTON COUNTY
Shut Down
Boner & Phillips, Harty et al 1.
Wilkerson, Hart Brothers 1.
Trietsch, Hudson Brothers 1.
Wells shut down, 3; total, 3.

ERATH COUNTY
Shut Down
Barton, Gillett 1.
Finch, Nelson Oil Syndicate 3.
Wells shut down, 2; total, 2.

FANNIN COUNTY
Rigs
Farling, Gist & Graddy 1.
Shut Down
Broadfoot, Honey Grove Oil & Gas Co. 1.
Rigs, 1; wells shut down, 1; total, 2.

FOARD COUNTY
Wells Drilling
Atkin, Clark et al 1.
Matthews, Fain-McGaha Oil Corp. et al 1.
Watkins, The Texas Company 1.
Shut Down
McAdams, Humble Oil & Refining Co. & Navarro Oil Co. 1.
Wells drilling, 3; wells shut down, 1; total, 4.

GRAYSON COUNTY
Wells Drilling
Handy & Thorn, Tucker & Everett 1.
Wall, Simpson & Fell 1.
Shut Down
Taylor, Richardson Brothers 1.
Wells drilling, 2; wells shut down, 1; total, 3.

HARDEMAN COUNTY
Wells Drilling
Reeves, Milham Corp. 1.

HASKELL COUNTY
Wells Drilling
Reynolds, Edmiston & Critton 1.
Wright, Kouri et al 1.
Thompkins, Martin & Stewart 1.
Shut Down
Clark, Marland-Texon 1.
Reynolds, Moody Oil Corp. 1.
Jetter, Subbie Oil Interests 1.
Colbert, Weirt & York 1.
Wells drilling, 3; wells shut down, 4; total, 7.

KNOX COUNTY
Wells Drilling
Beavers, Deep Rock Oil Co. 1.
Coffman, Deep Rock Oil Co. 1.
Shut Down
Moore, Deep Rock Oil Co. 1.
Goode, Humble Oil & Refining Co. 1.
Wells drilling, 2; wells shut down, 2; total, 4.

McCULLOCH COUNTY
Rigs
Kage, Dobbs & Kreis 1.
Shut Down
Williamson, Cobb 1.
Rigs, 1; wells shut down, 1; total, 2.

PARKER COUNTY
Shut Down
Bell, Woold-Hats Oil Corp. 1.

WISE COUNTY
Shut Down
Rogers, Cummings et al 1.

MISCELLANEOUS WEST TEXAS COUNTIES
ANDREWS COUNTY
Wells Drilling
Ratliff & Bedford, Calvin & Belt 1.
Ratliff & Bedford, J. S. Cosden 1.
W. J. Harris, Deep Rock Oil Co. 1.
Shut Down
J. S. Means, Neff et al 1.
Cowden, Zweifel & Carter 1.
Rigs, 0; wells drilling, 3; shut down, 2; total, 5.

BORDEN COUNTY
Rigs
G. E. McDavid, Marland Oil 1.

BREWSTER COUNTY
Rigs
Decies, Cady & Keller 1.
Kimball, Reese & White 1.
Wells Drilling
Turney, Mid-Kansas O. & G. 1.
Shut Down
McIntyre, McPhail & Kempter 1.
Gage, Wilcox & Andersen 1.
Rigs, 2; wells drilling, 1; shut down 2; total, 5.

COKE COUNTY
Wells Drilling
Mrs. B. Brynes, Danciger O. & R. 1.
E. C. Rawlings, Lipan Oil 1.
S. M. Conner, Lipan Oil Co. 1.
Shut Down
W. L. Foster, W. H. Brown et al 1.
Wells drilling, 3; shut down, 1; total, 4.

CONCHO COUNTY
Wells Drilling
Hartgrove, Exploration Co. 1.

CULBERSON COUNTY
Shut Down
Radford Gro. Co., Jas. H. Gardner et al 1.
Miller, Scott & Dittman 1.
Shut down, 2; total, 2.

ECTOR COUNTY
Rigs
W. E. Connell, The Texas Company et al 1.
Shut Down
G. W. Connell-A, The Texas Company et al 2, 3.
Rigs, 1; shut down, 2; total, 3.

GAINES COUNTY
Wells Drilling
Birge & Forbes Land Co., Westheimer & Daube 1.

GARZA COUNTY
Shut Down
D. Boren, Emerald Oil Co. 1.

GLASSCOCK COUNTY
Rigs
W. B. Currie, California Co. 2.
Wells Drilling
L. S. McDowell, World Oil Co. and J. S. Meriwether 1.
Shut Down
F. G. Oxsheer, Green et al 1.
Settles, Texon-Marland 1.
Rigs, 1; wells drilling, 1; shut down, 2; total, 4.

FISHER COUNTY
Rigs
J. A. Young, Cranfill & Reynolds 1.
J. S. McCall, Marland- Texon 1.
Wells Drilling
W. W. Ammons, Miley Oil Corp. and Marland Oil Co. 1.
D. Stevens, The Texas Company 1.
Shut Down
Langford, Hucony Gas Co. 1.
Jameson, Ideal Oil Co. 1.
Marberry, Rainey et al 2.
J. A. Danise, Sinclair O. & G. Co. 1.
Rigs, 2; wells drilling, 2; shut down, 4; total, 8.

HUDSPETH COUNTY
Rigs
Gardner & Mosely, Lockhart et al 1.
Shut Down
Gardner & Mosely, Lockhart Bros. 1.
Moore, Lockhart et al 1.
Rigs, 1; shut down, 2; total, 3.

IRION COUNTY
Shut Down
G. H. Bird, Cash Dollar et al 1.

JEFF DAVIS COUNTY
Wells Drilling
Crecencio Flores, Humble O. & R. Co. 2.
Shut Down
J. Z. Means, J. K. Hughes Dev. Co. 2.
Rigs, 0; wells drilling, 1; shut down, 1; total, 2.

KENT COUNTY
Rigs
N. B. Bibly, Marland-Texon 1.

LOVING COUNTY
Rigs
Fee, Lockhart Bros. 1.
Shut Down
W. D. Johnson, Owens & Sloan 1.
Rigs, 1; shut down, 1; total, 2.

LYNN COUNTY
Wells Drilling
Nevels, Elpo Oil Co. 1.
Shut Down
Edwards, Hart O'l Corp. 1.
Wells drilling, 1; shut down, 1; total, 2.

MIDLAND COUNTY
Shut Down
J. M. Moreland, Orbit Oil Co. 1.

NILAN COUNTY
Rigs
Pepper, Herbert Oil Co. 1.
T. E. Arledge, Reiter-Foster Oil Corp. 1.
Shut Down
Longbotham, Zweifel et al 1.
Rigs, 2; shut down, 1; total, 3.

PRESIDIO COUNTY
Rigs
Fields, Pinto Canyon Oil Co. 1.
Shut Down
Tootle est., Headlock & Miller 1.
Rigs, 1; shut down, 1; total, 2.

REEVES COUNTY
Shut Down
A. A. Kinney, Exploration Co. 1.
Duff, World Oil Co. 1.
Holder, World O'l Co. 1.
A. A. Eddins, David R. Thompson 1.
Shut down, 4; total, 4.

RUNNELS COUNTY
Rigs
Chas. Ray, Miles Oil Co. 1.
H. B. Fowler, Owenwood Oil Corp. 1.
Wells Drilling
J. E. Tally, Kennedy et al 1.
J. M. Schneider, May et al 1.
L. S. Lawhon, Miles Oil Co. 1.
Simms, Noble O. & G. Co. 1.
Shut Down
E. A W.erner, Swensondale Oil Co. 1.
Rigs, 2; wells drilling, 4; shut down, 1; total, 7.

SCHLEICHER COUNTY
Shut Down
J. A. & W. T. Whitten, Beavers & Leath 1.
Ball Robinson, Thomas Grey et al 1.
Shut down, 2; total, 2.

SCURRY COUNTY
Rigs
J. J. Koonsman, J. B. M'ms et al 1.

STERLING COUNTY
Shut Down
Neal Reed, Orr et al 1.

STONEWALL COUNTY
Shut Down
R. P. Morrow, Peer Oil Corp. and J. P Johnston 1.

TAYLOR COUNTY
Wells Drilling
Henslee, Brown Prod. Co. 1.
Sam Butman, Roeser & Pendleton 1.
Shut Down
J. A. Hamner, Dorning & Perrine 1.
C. M. Brown, Gilbert & Johnson and Dyar Bros. 1.
I. T. Latimer, Owens & Sloan 1.
Wells drilling, 2; shut down, 3; total, 5.

TERRY COUNTY
Wells Drilling
Brownfield, Kingsland O. & P. Co. 1.

TOM GREEN COUNTY
Shut Down
Llano County Sch. lands, Cox et al 1.
Bennett, Fitzgerald et al 1.
Adams, Tulsa Oil Co. 1.
Shut down, 3; total, 3.

VAL VERDE COUNTY
Wells Drilling
Whitehead, Magnolia Pet. Co. 1.
Shut Down
Moore est., A. Blume 1.
Sellars, Douglas Oil Co. 1.
Russell & Weathersbee, East Del Rio Oil 1.
W. J. & W. E. Whitehead, Independent Operators 1.
N. Y. J. Mills, O. O. Owens 1.
Holman, Williams et al 1.
Wells drilling, 1; shut down, 6; total, 7.

TEXAS PANHANDLE

Summary of Wells Completed, Texas Panhandle, October, 1927

County—	Comp.	Prod.	Dry	Gas
Carson	5	....	1	4
Childress	1	....	1	..
Gray	15	9,366	4	..
Hartley	3	....	3	..
Hutchinson	16	735	2	7
King	2	....	2	..
Moore	1	....	..	1
Wheeler	4	220	..	2
Totals, October	46	10,320	13	14
Totals, September	41	7,709	8	12
Difference	5	2,611	4	2

Summary of Rigs and Wells Drilling in the Texas Panhandle, October, 1927

County—	Rigs	Drlg.	S.D.	Ttl.
Carson	1	8	4	13
Gray	15	19	7	41
Hutchinson	5	16	31	52
Wheeler	1	5	5	11
Misc. Counties	5	20	34	59
Totals, October	27	68	81	176
Totals, September	19	91	80	190
Difference	8	23	1	14

Detailed Operations by Fields for October, 1927

WELLS COMPLETED
CARSON COUNTY
John Dees, Gamble & Co. 1 ..... dry
Burnett Estate, Empire G. & F. Co. 2... gas
Burnett Estate, Empire G. & F. Co. 3... gas

Burnett Estate, Empire G. & F. Co. 9... gas
Burnett Estate, Empire G. & F. Co. 10.. gas

Completions 5
Gas wells 4
Gas production 88,000,000
Dry holes 1

CHILDRESS COUNTY

O. L. Tucker, Hoover et al 1 ..... dry

GRAY COUNTY

J. A. Bowers-A, Gulf Prod. Co. 1..... 1767
W. C. Archer, Magnolia Pet. Co. 1 820
J. A. Hood, Midwest Explo. Co. 1 180
E. B. Johnson, Purple Sage Oil Co. 1... dry
Combs, Roxana Pet. Corp. 1 75
Worley, Roxana Pet. Corp. 4 61
W. Jackson, Delaney et al 4752
W. L. Herndon, Gray County Pet. Co. 1. dry
H. Heithholt, Magnolia Pet. Co. 1..... 24
Mary Leopold, Pampa Pet. Co. 1 ..... dry
J. B. Bowers, Pollard et al 1 172
I. B. Hughey, Empire G. & F. Co. 1... 34
J. B. Powers, Gibson Oil Corp. 1..... 1340
J. A. Hopkins, Riley & Heck 1 ..... dry
Combs & Worley, Wilcox et al 2 148

Completions 15
Production 9365
Gas Production 6,000,000
Dry Holes 4

HARTLEY COUNTY

Francis Farwell et al, J. E. McKanna, 1 dry
J. M. Shelton estate, J. E. McKanna, 1 dry

Completions 2
Dry holes 2

HUTCHINSON COUNTY

Ida Ingerton, Amarillo Oil Co. 1..... gas
Lee Bivins-B, Amarillo Oil Co. 6 ..... gas
W. L. Kingsland, Great Plains Oil Co. 1. dry
E. Cockrell, Wells et al 1 ..... gas
E. Cockrell, Cockrell-McElroy Oil Co. 1. gas
E. Cockrell-B, McIlroy Oil Co. 1 ..... gas
E. Cockrell, McIlroy et al 2 ..... gas
J. M. Sanford-Pool, McMillan Oil Corp. 1 40
W. L. Kingsland-Gibson, Phillips Pet. Co. 2-A 125
H. E. Smith et al, Currie & Holmes 1... 200
T. D. Lewis, Great West Pet. Co. 1 5
J. M. Sanford, Prairie O. & G. Co. 2.... 55
J. M. Sanford, Roxana Pet. Corp. 1..... 285
H. E. Smith et al, J. D. Ward 1 ..... dry
Cal Merchant, Prairie Oil & G. Co. and Vacuum Oil Co. 1 ..... gas
H. E. Smith et al, Ralph & Baker 1.... 25

Completions 16
Production 735
Gas wells 7
Gas production 300,000,000
Dry holes 2

KING COUNTY

Burnett estate, Gibson & Johnson 1..... dry
Spikes ranch No. 2, The California Co. 1 dry

Completions 2
Dry holes 2

MOORE COUNTY

J. T. Sneed, Jr., Moore County Oil Co. 1 gas

WHEELER COUNTY

J. D. Cuddeback, H. H. Vaughn et al 1. gas
H. Vermillion, Angus et al 1..... gas
J. H. Jackson, Lyons et al 1 100
G. Bell, The Texas Company 1..... 120

Completions 4
Production 220
Gas wells 2
Gas Production 91,000,000

CARSON COUNTY

Rig

Burnett estate, Empire G. & F. Co. 8.

Wells Drilling

Burnett estate, Empire G. & F. Co. 4, 5, 6.
Fee No. 244, Magnolia Pet. Co. 5.
E. Cooper, Stubblefield et al 1.
J. C. McConnel-B, The Texas Company 1.
Magnolia Pet. Co. fee, The Texas Company 4
Burnett estate, Willis et al 1.

Wells Shut Down

E. S. Polling, Amatex Dev. Co. 1.
J. L. Noel, Marston Oil Co. 1.
E. S. Polling, Noel Oil Co. 1.
J. W. Eller, Vitek Oil Co. 1.
Rig, 1; wells drilling, 8; wells shut down, 4; total, 13.

GRAY COUNTY

Rigs

J. B. Bowers-A, Gulf Prod. Co. 2
B. E. McKinney, Camel Oil Co. 1.
W. Jackson, Clark et al 2, 3.
W. Jackson, Danciger et al 3, 4.
W. Jackson, Delaney et al 2.
J. S. Morse, H. C. McCauley 1.
Coomley, Prairie et al 2.
B. E. McKinney, Remo Oil Co. 1.
W. Jackson, Skelly Oil Co. 1.
A. Chapman, Sullivan et al 1.
A. Chapman-A, Sullivan et al 1.
Combs & Worley, Wilcox et al 3.
C. W. Bradford, J. Williams 1.

Wells Drilling

A. Chapman, Amagray Oil Co. 1.
Crews, Amos et al 1.
Combs & Worley-C, Atlantic et al 1.
C. W. Bradford, Bay Shore Pet. Co. 1.
W. Harrah, Camel Oil Co. 1.
W. Jackson, Clark et al 1.
W. Jackson, Danciger et al 1, 2.
J. W. Gordon, Donley Gray Oil Co. 1.
B. J. George, Empire G. & F. Co. 1.
J. B. Bowers, Gibson Oil Corp. 2.
J. M. Shaw, Lefors Pet. Co. 1.
Merten Brothers, Magnolia Pet. Co. 18.
Fee, Navilius Oil Co. 1.
W. Jackson, Operators Oil Co. 1.
M. Huselby, Rensaul Pet. Co. 1.
J. B. Bass, Shamrock et al 1.
B. F. Tally, Staggers Oil Co. 1.
W. J. Brown, The Texas Company 1.
A. Chapman, The Texas Company 1.

Wells Shut Down

Furneaux, Archer Blake 1.
J. E. Williams, Cole Oil & Gas Co. 1.
E. J. Case, Edwards et al 1.
A. Chapman, Neudigate et al 1.
J. B. Bowers, Operators Oil Co. 2.
W. R. Campbell, Pampa Oil Co. 1.
G. Cole, C. B. Shafer 1.
Rigs, 15 wells drilling, 19; wells shut down, 7; total, 41.

HUTCHINSON COUNTY

Cal Merchant, Prairie O. & G. Co. and Vacuum Oil Co. 2.
J. M. Sanford, Barnum et al.
J. M. Sanford-Garland, Barnum et al 1.
E. Cockrell, Roxana Pet. Corp. 2.
C. R. Garner, Timms et al 1.

Wells Drilling

Albert Yake, McMan Oil & Gas Co. 1.
Lee Bivins, Harris et al 1.
J. M. Sanford, Paramount Oil Co. 3.
J. M. Sanford-State Land, Phillips Pet. Co. 1.
J. M. Sanford-Mudget, Phillips Pet. Co. 1.
J. A. Whitenburg, Phillips Pet. Co. and Gibson Oil Corp. 13.
Lee Bivins, Phillips Pet. Co. and White Eagle Oil & Refg. Co. 1.
Burnett estate, Prairie Oil & Gas Co. 1.
E. Cockrell, Roxana Pet. Corp. 2.
E. Cockrell, The Texas Company 1.
E. Cockrell-B, The Texas Company 1.
T. D. Lewis, The Texas Company 1.
J. L. Moore, The Texas Company 1.
J. M. Sanford, Williams et al 1.
E. Cockrell, Wills et al 1.

Wells Shut Down

Albert Yake, Anderson & Pritchard 2.
R. A. Jameson, Skyrocket Oil Co. 1.
J. F. Weatherly, American Refg. Co. 7.
J. M. Sanford, Antelope Creek Oil Co. 2.
E. Cockrell, Bean et al 1.
F. P. Works, Big Coach Oil Co. 1.
J. M. Sanford, Canadian River Oil Co. 1.
E. Cockrell, El Reo Oil Co. 1.
Johnson Brothers-B, Empire G. & F. Co. 7.
J. M. Sanford, Gordon et al 1.
Lee Bivins, Great Plains Oil Co. 1.
Johnson Brothers, Manhattan Oil Co. 2.
E. Cockrell-Martin, McMan Oil & Gas Co. 3.
J. A. Whittenburg, Midwest Exploration C. 7, 8.
E. Cockrell-Dickson, Navajo Oil Co. 1.
J. A. Whittenburg-Elra, Phillips Pet. Co. 12.
J. A. Whittenburg, Phillips Pet. Co. and Coble Oil Co. 22, 28.
Johnson Brothers-A, Prairie Oil & Gas Co. et al 52, 53, 55, 56, 59, 61, 63.
M. Weatherly, Prairie Oil & Gas Co. et al 4, 12.
J. Q. Bost, Tyler Oil Co. 1.
E. Cockrell, White & Lane 1, 2.
Rigs, 5; wells drilling, 16; wells shut down, 31; total, 52.

WHEELER COUNTY

Rig

Johnson, Byrens et al 1.

Wells Drilling

M. J. Williams, E. L. Arnold et al 1.
S. R. McDonald, Foster et al 1.
Fee, Hatcher et al 1.
M. E. Ackley, Piney Oil Co. 1.
W. S. Walker, Piney Oil Co. 1.

Wells Shut Down

Sam Pakan, Dobbs et al 1.
H. C. Phillips, Gibson Oil Corp. 7.
W. E. Bentley, Marland Oil Co. 2.
Sorenson, Smith-Brady et al 1.
D. L. Morgan, The Texas Company 1.
Rig, 1; wells drilling, 5; wells shut down, 5; total, 11.

MISCELLANEOUS TEXAS PANHANDLE COUNTIES

Armstrong County—

Wells Shut Down

E. D. Harrell, Meadows et al 1.

Bailey County—

Rig

Webb Miller, Gibson Oil Corp. et al.

Well Drilling

W. H. Fuqua, Humble Oil & Refg. Co. 1
Rig, 1; well drilling, 1; total, 2.

Childress County—

Well Drilling

B. F. Smith, Continental Oil Co. 1.

Wells Shut Down

Mrs. Givins, Brookins et al 1.
B. F. Smith, C. L. Sloane 1.
Wells drilling, 1; wells shut down, 2; total, 3.

Collingsworth County—

Rig

Wilson, Harmon & Reams 1.

Cottle County—

Well Shut Down

Richardson, Exploration Co. of Texas 1.

Dallam County—

Wells Drilling

A. M. James, Marland Oil Co.
Capitol Syndicate, Marland Oil Co. et al 1.

Well Shut Down

Capitol Syndicate, Harry Skelly et al 1.
Wells drilling, 2; well shut down, 1; total, 3.

Donley County—

Well Shut Down

F. Harrington, A. T. Drilling Co. 1.

Floyd County—

Rig

Nelson, Hoffer Oil Corp. 1.

Wells Shut Down

Boone, The Exploration Co. 1.
Matador Land & Cattle Co., The Exploration Co. 1.
Rig, 1; wells shut down, 2; total, 3.

Hale County—

Wells Drilling

Thomas, Bailey & Young 1.
W. A. Richter, A. S. Mims 1.
Kitteral, Tolbert & Simms 1.

Wells Shut Down

Mullican, Engleking Drilling Co. 1, 2.
Crawford, The Exploration Co. 1.
Goodman, The Exploration Co. 1.
Wells drilling, 3; wells shut down 4; total, 7.

Hansford County—

Wells Shut Down

J. Adriance estate, Caldwell et al 1.
G. B. Coots, Oklavania Oil Co. et al 1
Wells shut down, 2; total, 2.

Hartley County—

Well Drilling

J. B. Irving, Eslick et al 1.

Wells Shut Down

Lyman & Belfour, Deep Rock Oil Co. 1.
Well drilling, 1; well shut down, 1; total, 2.

Hemphill County—

Wells Drilling

H. E. Hoover, Hoover et al 1.

Hockley County—

Well Drilling

Ellwood, World Oil Co. 1.

King County—

Wells Drilling

F. Patton, Midwest Exploration Co. 1
F. Patton, J. L. Pattison 1.

Wells Shut Down

Pitchfork L and & Cattle Co. 1.
Burnett estate, White Eagle Oil & Refining Co. 1.
Wells drilling, 2; wells shut down, 2; total, 4.

Lamb County—

Rig

Ellwood, Dan Freel et al 1.

Well Shut Down

Ellwood, Tolbert & Simms 1.
Rigs, 1; wells shut down, 1; total, 2.

Lipscomb County—

Rig

H. Frase, Ozark Drilling Co. 1.

Wells Shut Down

R. C. Bradford, Caltex Oil Co. 1.
Box T. ranch, Everett et al 1.
A. Barton, McCorkle 1.
C. W. Jones, Smith-Knisely et al 1.
Rigs, 1; wells shut down, 4; total, 5.

Lubbock County—

Well Shut Down

Bowles ranch, Center Oil Co. 1.

Moore County—

Wells Drilling

O. E. Gober, Prairie Oil & Gas Co. 2.
John Lowery, Shadler Brothers 1.
Armstrong & Byrd, Skelly Oil Co. 1.
Wells drilling, 3; total, 3.

Motley County—

Wells Shut Down

Burleson, Exploration Co. of Texas 1.
Matador Land & Cattle Co., Exploration Co. of Texas 1.
Tillson, Exploration Co. of Texas 1.
C. W. Bird, Wheeler et al 1.
Wells shut down, 4; total, 4.

Ochiltree County—

Well Drilling

Strickler, W. G. Burton 1.

Wells Shut Down

H. E. Wamble, Hamilton et al 1.
R. H. Moore, McCorkle Pipe Line Co. 1.
Weinett, Montgomery 1.
Bowen, Standard Development Co. 1.
Well, drilling, 1; wells shut down, 4; total, 5.

Oldham County—

Well Drilling

Landergin, Prairie Oil & Gas Co. 1.

Potter County—

Well Drilling

Masterson-B, Amarillo Oil Co. 1.

Roberts County—

Wells Shut Down

Lederick et al, Big Bend Oil Co. 1.
W. T. Hammond, Roco Oil Co. 1.
Wells shut down, 2; total, 2.

Sherman County—

Wells Drilling

Lee Bivins, Gibson Oil Corp. 1.
Price & Fuqua, Phillips Pet. Co. and Prairie Oil & Gas Co. 1.

Well Shut Down

S. F. Flores, Marland Oil Co. et al 1.
Wells drilling, 2; wells shut down, 1; total, 3.

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Limestone	10	591	7	0	1	8	9
Anderson	2	0	2	0	0	2	2
Cherokee	1	0	1	0	0	2	2
Smith	0	0	0	0	1	1	2
Freestone	0	0	0	0	0	1	1
Total Oct.	13	591	10	0	2	14	16
Total Sept.	5	1,575	1	0	6	18	24
Difference	8	984	9	0	4	4	8

WELLS COMPLETED
ANDERSON COUNTY

Clemmons, Humble O. & R. ..... dry
Russell, Humble O. & R. 1 ..... dry
Completed, 2; dry, 2.

LIMESTONE COUNTY

Ward, Reiter, Lewis et al 2 227
Lewis, Transcontinental Oil Co. 1..... 40
R. P. Ward, Rycade Oil 1 ..... dry
Bassett, Pandem Oil 1 ..... dry
Dugger, Transcontinental Oil 1 ..... dry
Dugger, Transcontinental Oil 2 ..... abd
Lewis, Reiter, Lewis et al 1 324
Dugger, Simms Oil 1 ..... dry
Dugger, Reiter, Lewis et al 1 ..... dry
Priddy, Hunt, Hicks et al 1 ..... dry
Completed, 10; production, 591; dry, 7.

CHEROKEE COUNTY

Reynolds, Humble O. & R. 1 ..... dry
Completed, 1; dry, 1.

RIGS AND WELLS DRILLING
LIMESTONE COUNTY
Rigs

Williams, Harrison et al 1.

SMITH COUNTY
Rigs

Morgan, Gulf Prod. Co. 1.

ANDERSON COUNTY
Wells Drilling

Douglas, Cosden et al 1.
Jones, Humble O. & R. 1.

CHEROKEE COUNTY
Wells Drilling

Earl & Ragsdale, Humble O. & R. 3.
Elliott & Clarke, Humble O. & R. 2 (gas sand)

FREESTONE COUNTY
Well Drilling

Clements, Orbit Oil 1.

LIMESTONE COUNTY
Wells Drilling

Lewis, J. K. Hughes Dev. 1.
Lewis, Reiter, Lewis et al 2.
Ward, Transcontinental Oil 2.
Dugger, Transcontinental Oil 2
Lewis, Transcontinental Oil 2.
Lewis, Why Not Oil 2.
Rhea, Why Not Oil 1.
Fenner, Dillon & Hammond 1.

SMITH COUNTY
Well Drilling

Parker, Gaither et al 1.
Rigs, 2; wells drilling, 14; total, 14.

NORTH LA.-ARK.

ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Union	13	*581	5	1	11	10	21
Ouachita	4	75	2	1	1	5	6
Columbia	2	0	2	0	2	0	2
Nevada	5	400	0	0	0	10	10
Ashley	0	0	0	0	0	1	1
Hempstead	2	0	2	0	0	0	0
Calhoun	0	0	0	0	0	1	1
Miller	0	0	0	0	0	1	1
Lafayette	1	0	1	0	0	1	1
Total	27	1,056	12	2	14	29	43
Total Sept.	21	1,074	7	2	14	37	51
Difference	6	18	5	0	0	8	8

*With two wells producing gas.

LOUISIANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bienville	0	0	0	0	0	3	3
Bossier	8	0	2	6	2	16	18
Caddo	16	*760	7	4	14	35	49
Claiborne	0	0	0	0	1	1	2
DeSoto	1	0	1	0	1	4	5
Grant	0	0	0	0	2	0	2
LaSalle	6	190	4	0	0	3	3
Monroe district	6	†	1	5	9	7	16
Red River	0	0	0	0	0	2	2
Richland	6	‡	1	5	6	7	13
Sabine	3	15	1	3	4	8	12
Webster	5	6	1	3	4	8	12
Winn	2	0	2	0	5	5	10
Catahoula	1	0	1	0	4	1	5
Natchitoches	1	0	1	0	1	2	3
West Carroll	0	0	0	0	0	2	2
Total	55	965	22	26	53	104	157
Total Sept.	66	3,954	29	21	42	110	152
Difference	11	2,989	7	5	11	6	6

*With one well also producing gas.
†57,500,000 feet of gas.
‡16,535,000 feet of gas.

WELLS COMPLETED
BOSSIER PARISH

23-23-12 J. S. Farrington, Atlantic Oil Prod. Co. and Woodley & Collins 1 ..... dry
22-23-12 Mays, Bahan & Davis 2 ..... gas
16-23-12 Dodson, Bethany O. & G. 2 .. gas
14-19-11 Larkin, R. L. Crook 6 ..... dry
14-19-11 Larkin, R. L. Crook 7 ..... gas
16-23-12 E. C. Dodson, Magnolia Pet. Co. 1 ..... gas
15-23-12 Dodson, Simms Oil Co. 2 ..... gas
15-23-12 Dodson, Simms Oil Co. 1 ..... gas

Wells completed 5
Gas 6
Dry 2
Gas production 138,750,000

CADDO PARISH

14-21-15 Huckaby, Arkansas F. O. Co. 1 120
10-18-16 P. Sharp, Belchic & Laskey 2 gas
31-17-16 Abney, J. R. Bahan 1 ..... dry
27-18-16 Hammock, J. O. A. Carper 1 .. dry
27-21-15 Slattery, Dixie Oil Co. 10 ... dry
14-21-15 Files & Mabry, Dixie Oil Co. 6-B ..... gas
14-21-15 Dillon, Dixie Oil Co. 90 ..... gas
15-21-15 J. H. Herndon, Gulf Ref. Co. 10 25
15-21-15 Hampton, Golden Rod Oil Co. 1-A ..... dry
6-16-16 Augura, Greenwood Prod. Co. 3 dry
15-21-15 Vespy, Lewis Oil Corp. 9 .. abd
22-21-15 D. H. Raines, Magnolia Pet. Co. 26 100
13-20-15 Youree-Randolph, D. C. Richardson estate 5 300
22-21-15 Jolly, Shawmut Pet. Co. 5 ... abd
14-21-15 J K.. Herold, The Texas Co. 9 225
11-15-12 Knight, Woodley Pet. Co. 3-B.. gas

Wells completed 16
Production 760
Dry and abandoned 7
Gas 4
Gas production 45,000,000

CATAHOULA PARISH

4-9-8 Tensas Delta, S. D. Hunter 3 .. dry

DESOTO PARISH

11-10-13 D. H. Sebastian, Wm. Sebastian Syndicate 1 ..... dry

LA SALLE PARISH

34-11-2e Hardtner & Tannehill, Elbert Petroleum Co. 1 ..... dry
7-10-2e Urania, Bruce Hunt 5 40
11- 9-1e Zenoria Lumber Co., Montague Oil Co. 6 ..... dry
25-10-1e Morrow, Shreveport Oil Corp. 1 dry
3- 7-2e L. & A., Tunica Pet. Co. 39 .. dry
7-10-2e Urania, Zoder et al 5 150

Wells completed 6
Production 190
Dry and abandoned 4

MONROE DISTRICT

15-20-4e Faulk, W. C. Feazel 1 ..... gas
27-22-4e Tensas Delta, Natural Gas Prod. Co. 9 ..... gas
17-19-4e Feazel, C. W. Frierson 1 ..... gas
11-15-2e Grayling, J. S. Gould 1 ..... dry
5-18-4e Sullivan, Industrial Gas Co. 2 gas
6-19-5e Fee, Ladell Properties 44 .... gas

Wells completed 6
Dry and abandoned 1
Gas 5
Gas production 57,500,000

NATCHITOCHES PARISH

28-5-6 Wise, Lawson and Hurley 1 .... dry

SABINE PARISH

30-10-12 Nabors, Foster et al 1 ..... gas
32-10-12 Rembert, Magnolia Pet. Co. 1 15
23-10-11 Cook Land Co., P. H. Tate 1 .. dry

Wells completed 3
Gas 1
Dry 1
Production 15
Gas production 3,000,000

RICHLAND PARISH

3-17-9e Hawley, Aarnes et al 1 ..... dry
29-17-6e Marshfield, Gulf Ref. Co. 2 .. gas
30-17-6e Marshfield, Gulf Ref. Co. 3 .. gas
20-16-6e Hemler, Moody & Seagraves 1 gas
32-16-6e McCoy, Moody & Seagraves Co. 2 ..... gas

Wells completed 6
Gas 5
Dry 1
Gas production 16,535,310

WEBSTER PARISH

24-21-10 Hope, Crusaders O. & P. Co. 18 6
6-22-10 Branton, Magnolia Pet. Co. 2 gas
32-23- 9 Waller-O'Bier, Magnolia Pet. Co. ..... gas
33-20- 8 Gamble, Shreveport-El Dorado Co. ..... dry
23-21-10 Cox, Woodley Pet. Co. 1-B .. gas

Wells completed 5
Dry 1
Gas 3
Gas production 35,000,000
Production 6

WINN PARISH

35-13-3w Tremont, Dodge & Cordell 1.. abd
9-12-1w J. R. Rolen, Ohio Oil Co. 1 .. dry

ARKANSAS
WELLS COMPLETED
COLUMBIA COUNTY

3-16-21 Runyon, Big Creek Oil Co. 1 abd
14-19-22 Whitehead, Columbia Oil Synd. 1 ..... abd

HEMPSTEAD COUNTY
34-10-26 Goodlet, Arkansas Natural Gas Co. 1 ..... abd
2-11-26 Carrigan, Arkansas Natural Gas Co. 1 ..... abd
LAFAYETTE COUNTY
1-20-24 Red River, Kensaw Pet. Co. 2 abd
NEVADA COUNTY
6-14-20 Martin, Autrey Oil Co. 2-C .. 50
1-14-21 Moss, J. J. O'Brien 8-D 75
1-14-21 Wm. Haynie, J. J. O'Brien 3-B 100
1-14-21 Moss, J. J. O'Brien 5-B 125
6-14-20 Fairchild, Humble O. & F. Co. 1 50
Wells completed 5
Production 400
OUACHITA COUNTY
4-16-15 Berg, Exchange Oil Co. 4 .... gas
12-12-18 Camden Coal & Clay Co., H. M. Harrell 1 ..... dry
12-11-18 Bacon, Moody Oil Corp. 1 .... dry
34-15-15 Snyder, Owenwood Oil Corp. 2 75
Wells completed 4
Production 75
Dry 2
Gas 1
Gas production 8,000,000
UNION COUNTY
9-16-15 Murphy, Imperial O & G. Co. 5 dry
12-17-15 Ezell, W. R. Keever 2 40
4-16-15 Hays, Lion O. & R. Co. 7 128
8-16-15 J. Murphy, Magnolia Pet. Co. 3 gas
1-17-14 Carroll, Magnolia Pet. Co. 1 .. 300
9-17-15 Boyd, Mazda Oil Corp. 1 .... dry
5-16-15 Hill, Natural Gas & Fuel Corp. 3-B ..... abd
10-16-15 Lawton, Sam Richardson 2 .. abd
5-16-16 Saxon, Smitherman & McDonald 4-B 30
3-16-15 Lyell, Southern Crude Oil Purchasing Co. 7-B 8
15-16-16 Wells, Southern Crude Oil Purchasing Co. 5-A 5
3-16-15 Roper, Unity Pet. Co. 8 ..... dry
3-16-15 Roper, Unity Pet. Co. 12 100
Wells completed 13
Production 581
Dry 5
Gas 1
Gas production 3,500,000

NORTH LOUISIANA
RIGS AND WELLS DRILLING

BIENVILLE PARISH
Wells Drilling
11-17- 6 Perrit, Edwin J. Forest 1.
16-16-10 State, Lake Bisteneau Gas Co. 1.
18-16- 5 Hays, Louisiana Pet. Co. 1.
Rigs, 0; wells drilling, 3; total, 3.
BOSSIER PARISH
Rigs and Locations
10-23-13 R. E. Hamiter, Hamiter et al 1.
26-23-12 D. W. Roberson, Magnolia Pet. Co. 1.
Wells Drilling
15-23-12 Dodson, Bahan & Davis 1 (second hole).
9-22-11 Bollinger, Doern et al 1.
2-16-13 Curtis, H. S. Goodwin, trustee 1.
15-19-11 Bliss & Wetherbee, Humble O. & R. Co. 30.
17-18-11 Hale-Rumbaugh, Jenson Rogers & Gibson 1.
23-23-12 Zula Roberson, Magnolia Pet. Co. 1.
25-16-12 Hodges, J. S. McCullough, tr. 3.
12-23-12 Mays, Northwest Louisiana Gas Co. 1.
22-23-12 Dodson, O'Brien Brothers 1.
7-17-11 Werner, R. O. Roy 1.
30-23-11 Bollinger, Sales & Walker 3.
24-17-12 Smith, Sligo Syndicate 2
36-23-12 Wilkerson, The Texas Company 1.
3-20-14 Sentell & Dickson, Triangle Drilling Co. 1.
21-16-10 Lincoln Land Co., Woodley & Collins 1.
15-23-12 L. & A., Atlantic Oil Producing Co. and Woodley & Collins 3.
Shut Down
28-22-13 Antrim, Walker et al 1.
Rigs, 2; wells drilling, 16; shut down, 1; total, 19.
CADDO PARISH
Rigs and Locations
10-18-16 R. T. Sharp, Belchic & Laskey 3.
16-21-15 Caldwell, J. W. Burton, tr. 8.
14-21-15 Clark, Dixie Oil Co. 9.
14-21-15 Dillon, Dixie Oil Co. 91.
11-21-15 H. H. Huckaby, Dixie Oil Co. 4.
15-21-15 J. H. Herndon, Gulf Ref. Co. 11.
4-16-16 Bell, Magnolia Pet. Co. 2.
24-21-15 Dillon, Magnolia Pet. Co. 18.
23-21-15 Robertshaw, Magnolia Pet. Co. 22.
12-23-16 Thompson, Ohio Oil Co. 1.
28-21-15 State, Shreveport Oil Corp. 1.
14-21-15 Herndon, The Texas Company 7.
2-15-12 Knight, Woodley Pet. Co. 4-B.
23-19-14 McVey, Woodley & Collins 1-A.
Wells Drilling
23-21-15 Bashara, Arkansas F. O. Co. 2.
13-21-15 C. W. Lane, Arkansas Natural Gas Co. 2.
16-21-15 Caldwell, J. W. Burton, tr. 7.
23-21-15 J. D. Rickman, Bussa & McGoldrick 7.
23-21-15 Caddo Mineral Lands, Dixie Oil Co. 9.
14-21-15 Dillon, Dixie Oil Co. 89.
13-21-16 Noel, Dixie Oil Co. 2-A.
5-20-16 Rives, W. W. Dodson et al 6.
27-21-15 Watkins & Lane, Double I Oil Co. 7.
27-20- 5 Schmidt, Falcon Drilling Co. 1.
29-21-16 J. J. Hart, F. D. Gray et al 1.
15-17-16 McCutchen, Greenwood Production Co. 1.
14-21-15 Murray, Haynes Brothers 2.
15-21-15 Spell, Haynes Brothers 2.
28-18-16 Furrh, Magnolia Pet. Co. 1.
12-18-16 John Furrh, Magnolia Pet. Co. 1.
15-21-15 Hampton, Magnolia Pet. Co. 8-A.
23-21-15 Robertshaw, Magnolia Pet. Co. 21.
12-21-15 E. K. Smith, Ohio Oil Co. 25.
17-21-14 Sellington, Palmer Corp. 1.
34-21-16 J. J. Hart, Standard Oil Co. 15.
16-21-16 Heipman heirs, Standard Oil Co. 53.
22-22-15 Jolly, Standard Oil Co. 1.
26-20-15 Youree, Superior Oil Co. 6.
23-21-15 Caddo Mineral Lands, The Texas Company 49.
23-21-15 Caddo Mineral Lands, The Texas Company 50.
23-21-15 Caddo Mineral Lands, The Texas Company 51.
14-21-15 A. Herndon, The Texas Company 6.
14-21-15 Herndon, The Texas Company 8.
14-21-15 Herndon, The Texas Company 9.
14-21-15 J. K. Herold, The Texas Company 10.
15-21-15 Mabry, The Texas Company 10.
14-21-15 Noel, The Texas Company 14-B.
15-21-15 D. H. Raines, The Texas Company 19.
9-14-16 Ben Hines, Grubbs et al 1.
Shut Down
1-20-16 Offenhauser, Bethany O. & G. Co. 1
32-23-16 Aaron Brothers Land Co., Ohio Oil Co. 1.
32-23-16 E. Pium, Ohio Oil Co. 1.
15-21-15 Herndon, Pittsburg Oil & Development Co. 1.
27-21-15 State, Shreveport Oil Corp. 2.
15-20-15 Thomas et al, Simplex Oil Co. 3.
33-21-16 Stiles, Standard Oil Co. 179.
27-21-16 Stiles, Standard Oil Co. 189.
18-18-16 Wheeler, State Line Oil & Gas Co. 1.
23-21-15 Caddo Mineral Lands Co., The Texas Company 47.
Rigs, 14; wells drilling, 35; shut down, 10; total, 59.
CALDWELL PARISH
Shut Down
6-12-4e Crockett, Grayson Oil Co. 1.
5-13-5e Caldwell Land & Timber Co., Southern Crude Oil Pur. Co. 1.
Rigs, 0; wells drilling, 0; shut down, 2; total, 2.
CATAHOULA PARISH
Rigs and Locations
21-9-7e Tensas Delta, S. D. Hunter 2.
29-9-6e McMillan, Lochnager O. & G. Co. 1.
23-8-5e Tensas Delta, Standard Oil Co. 1.
Wells Drilling
26-9-6e Beasley, Lochnager O. & G. Co. 2.
Wells drilling, 1; rigs and locations, 3; total, 4.
CLAIBORNE PARISH
Rigs and Locations
8-20-6 Jones, El Dorado Chief Oil Co. 1.
Wells Drilling
16-22-8 C. C. Lee, Magnolia Pet. Co. 1.
Rigs and locations, 1; wells drilling, 1; total, 2.
DESOTO PARISH
Rigs and Locations
3-10-13 Wolff, Wm. Sebastian, tr. 1.
Wells Drilling
7-11-11 Lanier, American Controlled Oil Co. 1.
9-12-11 Jenkins, Dixie Oil Co. 1.
17-10-12 Logan, Magnolia Pet. Co. 1.
18-10-12 Haywood, Wingfield et al 1.
Shut Down
1-11-16 Frost-Johnson Lumber Co., Chal Daniels 1.
8-11-14 Jones, Reliance Drilling Co. 1.
36-13-12 Sample, The Texas Company, 15-C.
2-12-12 Wemple, The Texas Company, 6-A.
Rigs and locations, 1; wells drilling, 4; shut down, 4; total, 9.
FRANKLIN PARISH
Shut Down
3-15-7e Baker, Barbour Oil Co. 1.
12-11-6e Moore, Pittsburgh Expltn. Co. 1.
Wells drilling, 0; rigs and locations, 0; shut down, 2; total, 2.
GRANT PARISH
Rigs and Locations
18-9-1e Swope, Holmes et al 2.
18-9-1e Fee, Swope et al 5.
Shut Down
18-9-1e Fee, Swope et al 3.
Wells drilling, 0; rigs and locations, 2; shut down, 1; total, 3.
LA SALLE PARISH
Wells Drilling
20-10-2e Urania, Natural G. & F. Corp. 12-M
7-10-2e Urania, Pima Oil Co. 10.
15- 7-2e L. & A., Tunica Pet. Co. 40.
Shut Down
7-10-2e Urania, Elbert Pet. Co. 5.
2- 9-1e Gibson, Wingfield et al 2.
Rigs and locations, 0; wells drilling, 3; shut down, 2; total, 5.
MONROE DISTRICT
Rigs and Locations
14-20-4e Perry, Consolidated Carbon Co. 1.
10-22-9e Bonita Lumber Co., Keister et al 1.
27-22-4e Tensas Delta, Natural Gas Products Co. 10.
26-20-5e Atkins, United Carbon Co. 1.
3-18-4e McGee, Industrial Gas Co. 1.
18-18-5e Miller, Jordan Drilling Co. 1.
38-19-4e Fairbanks, Southern Carbon Co. 8.
22-20-3e Parks, Interstate Natural Gas Co. 1
6-21-4e Stephens, Interstate Natural Gas Co. 1.
Wells Drilling
22-20-6e Siveley, The Texas Company 1.
16-19-4e Hatcher, Hatcher & Evans 6.
13-19-3e Stubbs, Imperial Oil & Gas Co. 2.
20-20-5e Fee, Ladell Properties 45.
34-19-3e D'Arbonne, Ouachita Natural Gas Co. 2-A.
36-20-3e Steele Interstate Natural Gas Co. 1.
20-20-4e Harris, Southern Carbon Co. 1.
Shut down
21-22-1e Tugwell, C. E. Cammatte 1.
Rigs and locations, 9; wells drilling, 7; shut down, 1; total, 17.
NATCHTOCHES PARISH
Rigs and Locations
4-10-10 Leopold, Tate et al 1.
Wells Drilling
25- 5- 6 Clark & Morse Lumber Co., Lawson & Pharis 3.
26-13- 6 L. & A., Ohio Oil Co. 2.
Wells drilling, 2; rigs and locations, 1; total, 3.
RED RIVER PARISH
Wells Drilling
25-13-11 Richardson, J. K. Askew 1.
20-13-10 Brinkerhoff, The Texas Company 36-B.
Shut Down
1-14-12 Neeley, Hazlett & Simmons 2.
Wells drilling, 2; shut down, 1; total, 3.
RICHLAND PARISH
Rigs and Locations
20-16-6e Hemler, W. C. Feazel 1.
6-15-6e Hemler, W. C. Feazel 2.
36-16-5e McClanahan, Moody & Seagraves 1.
30-16-6e McCoy, Moody & Seagraves 2.
19-16-6e Sartor, Natural G. & F. Corp. 2-B.
30-16-6e Sartor, Natural G. & F. Corp. 3-B.
Wells Drilling
23-16-5e Wayne Lumber & Timber Co., Gulf Refining Co. 2.
15-13-7e William Jones, Moody & Seagraves 1.
20-16-6e Sartor, Natural G. & F. Corp. 1.
2-15-5e Richard Hatch, Harry E. Oliver et al 1.
22-16-7e Delta Hardwood Co., Standard Drilling Co. 1.
1-16-6e Broughton, Texas-Louisiana Carbon Co.
31-18-7e Hemler, Woodley et al 1.
Shut Down
10-11-5e Tensas, Helm et al 1.
Rigs and locations, 6; wells drilling, 7; shut down, 1; total, 14.
SABINE PARISH
Rigs and Locations
33-1012 Logan, Arkansas F. O. Co. 11.
36-10-13 Logan, S. P. Borden, tr. 1.
9- 9-13 Burkett, Longoria et al 1.
5- 9-12 Moore, Moffat et al 3.
8- 7-13 Sabine Lumber Co., L. M. Emlet 1.
Wells Drilling
32-10-12 Logan, Arkansas F. O. Co. 1-A.
32-10-12 Moore, Arkansas F. O. Co. 2.
17- 7-14 Bowman-Hicks, L. M. Emlet 7-B.
29-10-12 Harris, Frazier et al 1.
33-10-12 Hall, Magnolia Pet. Co. 2.
32-10-12 Rembert, Magnolia Pet. Co. 2.
5- 8-13 Long-Bell Lumber Co., A. H. Tarver 1.
Shut Down
32-10-13 Logan, Arkansas F. O. Co. 10.
8- 7-12 Bowman-Hicks Lbr. Co., L. M. Emlet.
15- 7-14 Mansfield Hardwood Lumber Co., L. M. Emlet 1.
Rigs and locations, 5; wells drilling, 7; shut down, 3; total, 15.
WEBSTER PARISH
Rigs and Locations
22-21-10 Aarnes-Cox, Magnolia Pet. Co. 2.
22-21-10 J. M. Nixon, Magnolia Pet. Co. 1.
32-22- 9 Newson, Magnolia Pet. Co. 1.
1-22-10 Haynesville Mercantile Co., Magnolia Pet. Co. 1.
Wells Drilling
24-17- 9 M. Miles, S. A. Lane 1.
27-21-10 G. W. Cole, Magnolia Pet. Co. 1.
22-21-10 D. G. Cox, Magnolia Pet. Co. 1.
22-21-10 Cox, Magnolia Pet. Co. 3.
21-21-10 Marshall, Magnolia Pet. Co. 4.
21-21-10 Marshall, Magnolia Pet. Co. 5.
30-23- 9 Wise, Magnolia Pet. Co. 1.
23-21-10 R. L. Holloway, Ohio Oil Co. 4.
Rigs and locations, 4; wells drilling, 8; shut down, 0; total, 12.
WEST CARROLL PARISH
Wells Drilling
16-20-10 Pioneer Cooperage Co., Palmer Corp. 1.
32-20- 9 W. R. Marion, Phillips Pet. Co. 1.
Rigs and locations, 0; wells drilling, 2; shut down, 0; total, 2.
WINN PARISH
Rigs and Locations
5-12-1w Rolen, Ohio Oil Co. Well 2 Acct.1.
Wells Drilling
31-10-4w Edenborn, Ohio Oil Co. 1.
19-11-3w H. M. Roark, Southern Minerals Co. 3.
Rigs and locations, 1; wells drilling, 2; shut down, 0; total, 3.

ARKANSAS
UNION COUNTY
Rigs and Locations
10-17-14 Gregory, Garrett-Modisette Drilling Co. 1.
16-17-13 McGough, Ginther et al 1.
4-16-15 Murphy, Gulf Refining Co. 45.
9-16-15 Murphy, Keen & Woolf 6.
1-17-14 Carroll, Magnolia Pet. Co. 2.
8-16-16 Crawford, Magnolia Pet. Co. 3.
8-16-16 Laney, Magnolia Pet. Co. 3.
8-16-16 R. T. Laney, Magnolia Pet. Co. 4.
1-17-14 Crain, Ohio Oil Co. 3.
1-17-14 W. Pumphrey, Ohio Oil Co. 1.
21-17-11 Ark. Timber Co., Picher et al 1.
Wells Drilling
8-17-11 Rawland, Booth et al 1.
4-16-15 Murphy, Gulf Refining Co. 43.
9-16-15 Murphy, Keen & Woolf 4.
12-17-15 Ezell, W. R. Keever 3.
11-17-13 Stegall, Lyell et al 1.
7-16-15 Tatum, Magna Pet. Co. 6.
17-16-15 Wilson, Magnolia Pet. Co. 7.
1-17-14 Crain, Ohio Oil Co. 2.
4-17-14 McCain, Rovenger Oil Corp. 1.
4-16-15 Murphy, Standard Oil Co. 33.
Shut Down
8-18-12 Garner, Bondurant et al 1.
2-17-16 Slaughter, Brown et al 1.
21-18-12 Dykes, H. L. Hunt 1.
26-17-16 Goodwin, Imperial O. & G. Co. 1.
17-16-15 Murphy, E. M. Jones 11.
8-18-15 Pratt, Mountz et al 6.
8-16-16 W. A. Fugg, National Consolidated Pet. Corp. 1.
16-16-16 Saxon, J. J. O'Brien 1.
13-17-16 Newton, Rice et al 1.
32-15-16 Saxon, Smitherman & McDonald 2-A.
Rigs and locations, 11; wells drilling, 10; shut down, 10; total, 31.
OUACHITA COUNTY
Rigs and Locations
4-16-15 Hays, Marine Oil Co. 5-A.
Wells Drilling
4-16-15 Berg, Exchange Oil Co. 4.
28-14-16 Stout Lumber Co., Magnolia Pet. Co. 1-B.
34-15-15 Snyder, Marine Oil Co. 14.
26-15-16 Davisson, The Texas Company 1.
32-15-19 H. L. Curry, Brewer et al 1.
Shut Down
33-15-16 Johnette, F. A. Book 3.
13-15-17 Berg, Copenhaver et al 3.
31-14-17 J. W. Reynolds, A. T. Grayson 1.
3-14-18 Chandler estate, J. G. Reynolds 1.
22-15-19 Curlee Buffington Oil Co. 3.
Rigs and locations, 1; wells drilling, 5; shut down, 5; total, 11.
ASHLEY COUNTY
Wells Drilling
10-19-6 Keller, Glassell et al 1.
Rigs, 0; wells drilling, 1; total, 1.
BRADLEY COUNTY
Shut Down
12-12-12 Southern Tbr., Johnson & Adams 1.
Rigs, 0; wells drilling, 0.
CALHOUN COUNTY
3-14-16 Stout Lbr. Co., Genther et al 1.
Rigs, 0; wells drilling, 1; total, 1.
CLEVELAND COUNTY
Shut Down
31-10-10 Hall, Kingland Oil Co. 1.
Rigs, 0; wells drilling, 0.
COLUMBIA COUNTY
Rigs
15-17-22 Gantt, Maier et al 1.
8-17-19 Alexander, The Texas Company 1.
Shut Down
25-19-22 Franks, Mitchell et al 1.
4-20-21 Bodcau, Mitchell & Eylers 2.
6-18-20 Davis, Phillips Pet. Co. 2.
35-19-19 Duffer, Smith & Compton 1.
4-20-21 Bodcau, Wingfield & Mitchell 1.
Rigs, 2; wells drilling, 0; total, 2.
DREW COUNTY
Shut Down
36-18-5 Olga, McClintock & Goodka 1.
Rigs, 0; wells drilling, 0.
GRANT COUNTY
Shut Down
5-4-11 Meek, Jones & Watkins 1.
Rigs, 0; wells drilling, 0.
LAFAYETTE COUNTY
Wells Drilling
31-19-24 Kensaw, Kensaw Syndicate 1.
Rigs, 0; wells drilling, 1; total, 1.
LITTLE RIVER COUNTY
Shut Down
2-12-21 Allen, Grote et al 1.
Rigs, 0; wells drilling, 0.
MILLER COUNTY
Wells Drilling
22-15-26 Mann, Lenz et al 1.
Shut down
30-15-26 M. & P. Bank, Guest et al 1.
Rigs, 0; wells drilling, 1; total, 1.
NEVADA COUNTY
Wells Drilling
10-14-21 Wommack, Ames & Zing B-1.
9-14-21 McKinney, Burnham et al 1.
6-14-20 Fairchild, Humble O. & R. Co. 2
9-15-20 Pelt, McDonald et al 1.
6-14-20 Robt. Haynie, J. O'Brien 2.
1-14-21 Wm. Haynie, J. J O'Brien B-4.
1-14-21-Wm. Haynie, J. J. O'Brien B-5.
1-14-21 Moss, J. J. O'Brien A-5.
1-14-21 Moss, J. J. O'Brien A-15.
1-14-21 Moss, J. J. O'Brien B-9.
Shut Down
22-12-21 Rhodes, Fruean et al 1.
Rigs, 0; wells drilling, 10; total, 10.

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Tot.
Warren	4	22	1	0	5	1	6
Allen	6	10	5	0	0	10	10
Barren	26	190	12	0	0	22	22
Ohio	41	2,071	15	0	0	39	39
Daviess	2	25	0	0	1	7	8
Cumberland	0	0	0	0	0	1	1
Clinton	1	100	0	0	0	1	1
Hancock	0	0	0	0	1	1	2
Butler	0	0	0	0	0	2	2
McLean	1	100	0	0	0	2	2
Hopkins	0	0	0	0	0	1	1
Edmonson	0	0	0	0	0	1	1
Metcalf	1	0	0	1	0	0	0
Wayne	2	2	0	0	0	4	4
Lee-Owsley	1	2	0	0	0	5	5
Estill	12	30	1	0	0	6	6
Wolfe	0	0	0	0	0	1	1
Johnson-Magoffin	6	44	1	0	4	1	5
Floyd-Knott	3	0	0	0	0	6	6
Knox	0	0	0	0	0	3	3
Laurel	0	0	0	0	0	1	1
McCreary	0	0	0	0	0	1	1
Kentucky	106	2,595	37	5	6	123	129
Tennessee	14	904	1	1	0	38	38
Mississippi	1	0	1	0	11	18	29
Alabama	0	0	0	0	0	7	7
Florida	2	0	2	0	0	12	12
N. Carolina	0	0	0	0	0	1	1
Total Oct.	123	3,499	41	6	17	199	216
Total Sept.	111	3,794	39	4	16	189	205
Difference	12	295	2	2	1	10	11

WELLS COMPLETED
WARREN COUNTY
Bowling Green—Maggie Wheeler, Dr. H. L. Fischer 3 ..... gas
Maggie Wheeler, Dr. H. L. Fisher 4 dry
Elizabeth Morehead, G. B. Denning 7 2
H. M. Bryant, Thompson Oil 6 20
Wells completed 4
Production 22
Dry 1
Gas 1
ALLEN COUNTY
Scottsville—Geni. Wood, Mid-Southern Oil 14, 16 ..... dry
Geni. Wood, Mid-Southern Oil 15 16
Geni. Wood, 1,120s, S. W. Loman & Co. 3, 4 ..... dry
Riley Reed, W. P. Harley 1 ..... dry
Wells completed 6
Production 16
Dry 5
BARREN COUNTY
Wisdon Pool—Pulliam, J. G. Esslinger 1 dry
McAllister, Parks & Wolfe 1 ..... dry
Haywood Pool—Smith, A. W. Ziegler 1. dry
Christ Ellis, Ogle & Co. 3 6
Emery-Moore—Hayde Myers, Rred C. Moore 1 5
Hayde Myers, Fred C. Moore 2 5
Slaughter, R. B. Tyler 1 2
Reeves, Phil Kopel 2 ..... dry
Oskamp Pool — Browning, Langston & Co. 2 ..... dry
Unknown, Norris, Frazier & Co. 1.... dry
Near Lucas—Henderson, F. L. Esslinger 2 ..... dry
Lecta Pool—Loden, Samson Oil 4 20
Loden, Samson Oil 5 20
Loden, Samson Oil 6 50
Tom Eubank, Samson, Davis & Co. 1. dry
W. Browning, Hunt, Leach & Co. 2.. 20
W. Browning, Hunt, Leach & Co. 3.. 25
Williamson, White & Stombo 4..... 10
Sam Goodwin, Zinzer & Co. 2..... 10
Mayfield, R. B. Tyler 3..... 15
Baldock, Carpenter & Co. 1..... 1
Clark, Hereford Baker 1..... 1
Grady, Mutual Oil 2 ..... dry
Burks, J. D. White 3..... dry
Shirley, Sandais & Co. 1..... dry
Gooden 19-a, J. G. Esslinger 1..... dry
Wells completed 20
Production 190
Dry 12
OHIO COUNTY
Hartford—Fannie Lake, Creek Drlg. 10. 200
Fannie Lake, Creek Drlg. 11..... 200
Hill Rhodes, Daugherty & Co. 2..... 40
Cora Wells, Daugherty & Co. 5..... 200
Cora Wells, Daugherty & Co. 6..... 200
Mary J. Elmore, Wood Oil 17..... 200
Mary J. Elmore, Wood Oil 18..... 200
J. C. Smith, Wood Oil Co. 2..... 150
J. C. Smith, Wood Oil Co. 3..... 100
Ollie Esell, Daily & Lowman 2..... 150
M. S. Baker, Daily & Lowman 1..... dry
Joe Chapman, Bolling & Co. 2..... dry
J. S. Bartlett, Gourney Dev. 1..... 15
C. A. Kelly, Penn-Indiana Oil 5..... 20
C. A. Kelly, Penn-Indiana Oil 6..... 60
Ida Hedges, D. L. Johnson 1..... dry
J. E. Jewell, Ferdinand Heine 1..... dry
Wilbur King, Leeper Oil & Co. 1..... 10
N. W. Froman, Leeper Oil & Co. 1... 10
J. L. Stinnett, Rex-Pyramid Oil 3.. dry
R. C. Whittaker, Reed, McClintock & Co. 1 ..... dry
Delilah Lake, Ohio Oil 1..... 40
Delilah Lake, Ohio Oil 2..... 8
J. D. Davis, Ohio Oil 1..... 30

S. S. Phillips, Ohio Oil 2..... 8
W. W. Moseley, Ohio Oil 1..... dry
J. R. Weller, James C. Ellis 1..... dry
Mt. Moriah Church, Jas. C. Ellis 2... dry
B. L. Gossett, James C. Ellis 1..... 10
Spence Bartlett, James C. Ellis 2.... 50
Mary Cundiff, James C. Ellis 1..... 20
D. W. Smith, James C. Ellis 1..... dry
Howard heirs, White Plains O. & G. 5 20
J. H. Dodson, White Plains O. & G. 1 dry
Hart Ayers, White Plains O. & G. 5.. dry
A. P. Kelly 330-a, S. A. Russell 1... 10
E. L. Chapman, Engle & Daugherty 1 dry
Elijah King, Loelex Oil 1..... dry
Mary E. Wilson, Earl Patton 3..... 100
H. S. Taylor, Wittmer O. & G. 1..... dry
H. & W. Phillips, Chicago Pet. Synd. 1 dry

Wells completed 41
Production 2071
Dry 15

DAVIESS COUNTY

Whitesville — Mattingley, Thompson & Co. 1 15
Louis Petrie, Thompson & Co. 1..... 10

Wells completed 2
Production 25

CLINTON COUNTY

Wolf River Pool — Pierce, McClintock, Reed & Heckathorn 10 100

McLEAN COUNTY

Near Livia — John Ratcliff, Dimmick Bros. 1 100

METCALF COUNTY

Edmonton — Price, Samson, Davis & Mitchell 1 ..... gas

WAYNE COUNTY

District 2—Meredith, J. D. Meredith & Son 1 ..... dry
District 13—Wm. Bertram, Geo. A. Hook 12 ..... dry

Wells completed 2
Dry 2

LEE-OWSLEY COUNTIES

Island Creek — J. F. Brewe, Big Injun Oil 3 3

ESTILL COUNTY

District 7—J. Bill Rogers, Mtn. Springs Oil 15 1
District 8—Joe Alcorn, Superior Oil Corp. 10 3
Joe Alcorn, Superior Oil Corp. 11.... 3
J. D. Alexander, Superior Oil Corp. 23 dry
J. D. Alexander, Superior Oil Corp. 24 2
J. D. Alexander, Superior Oil Corp. 25 2
James Griffin, Superior Oil Corp. 20 3
T. Henderson, Superior Oil Corp. 20.. 5
Jeff Woffenbarker, Wood Oil 2..... 2
John Goff, Brenner, Adams & Co. 4.. 2
John Goff, Brenner, Adams & Co. 5.. 3
Eliza Stacy, Brenner, Adams & Co. 6. 4

Wells completed 12
Production 30
Dry 1

JOHNSON-MAGOFFIN COUNTIES

District 25—J. P. Conley, Reno Oil 13.. 5
J. P. Conley, Reno Oil 14..... 4
District 27 — Lemasters, Henry Lemasters 2 10
District 31—John Pace, Duff & Co. 1.. 5
J. W. Frazier, Short Fork Oil 5..... 20
H. B. May, Burning Fork Oil 1..... dry

Wells completed 6
Production 44
Dry 1

FLOYD-KNOTT COUNTIES

Beaver Creek—J. C. Collins, Ivyton O. & G. 1 ..... gas
Alonzo Howard, Ivyton O. & G. 1.... gas
Ester Horton, New Domain O. & G. 3 gas

Wells completed 3
Gas 3

TENNESSEE

CLAY COUNTY

Celina—Arms, J. S. Aber 2..... 20
Arms, J. S. Aber 3..... 20
Turner, Clark, Carnahan Oil 1..... 350
Holmes, E. G. Brandenburg 1..... 144
Rich, Howard, Dooley & Clark 2.... 50
Keisling, J. L. Miller 3..... 40
Wolf River, Pittsburgh parties 1.... 150
John Clark, Bell Bros. 1..... 50
Cunningham, Ohio Oil 3..... 10
Acey Key, Brown Bros. & Webb 1.. gas

Wells completed 10
Production 834
Gas 1

OVERTON COUNTY

Byrdstown Pike—Florida interests 1... 20
Eagle Creek—Richardson, J. D. Watkins 1 ..... dry

Wells completed 2
Production 20
Dry 1

JACKSON COUNTY

Gainesboro — Bill Dodson, Thompson & Bartlett 2 25
Loch Branch—W. R. Hawkins, Celina O. & G. 8 25

Wells completed 2
Production 50

MISSISSIPPI

MONROE COUNTY

Amory—Nancy Carter, Amory Pet. 2... dry

FLORIDA

POLK COUNTY

Sec. 40-32-27—West Frostproof O. & L. 1 dry

MANATEE COUNTY

Sec. 15-34-17—Robinson, Speedwell Pet. Synd. 1 ..... dry

KENTUCKY

WARREN COUNTY
Wells Drilling

Bowling Green—J. C. Davenport, W. B. Caudle 3.
J. L. Jenkins, J. L. Jenkins 1.
W. R. Hunton, O. H. Lavelle 10.
Keller, Alf F. Hughes 1.
Ora S. Davenport, Ruth Turner 5.
D. C. Butler, Thessen & Cupler 3.
H. M. Bryant, Thompson Oil 7.
Maggie Wheeler, Dr. H. L. Fischer 5.
Wells drilling, 8.

ALLEN COUNTY
Wells Drilling

Scottsville—Jim Bradley, Reher & Co. 1.
I. Strait, Dodson & Strait 1.
Connie Justice, James Dobie 1.
Max Willoughby, Dye & Dye 1.
Jess Stitt, Frank Duchen 1.
Arla Wade, J. R. Poynter & Co. 1.
J. Willoughby, Ross Works 1.
Riley Hunt, Riley Hunt 8.
W. H. Reed, Harley & Coatsworth 10.
Geni. Wood, Mid-Southern Oil 17.
Wells drilling, 10.

BARREN COUNTY
Wells Drilling

Gorby Pool—Thos. Wheeler, J. W. Porter & Co. 2.
Wisdon Pool—Christensen, Christensen & Co. 1.
Button Pool—Button, Lew J. Emery, Jr., Son Co. 1.
Haywood Pool—J. E. Bray, A. W. Ziegler 2.
U. M. Smith, Wood Oil 4.
Christ Ellis, Ogle & Co. 4.
Hiseville Pool—Owens, Samson Oil 1.
Coral Hill—Wallace Page, Hunt, Leach & Mitchell 1.
Emery-Moore Pool — Burley Neeley, Mazel Oil 8.
Hayde Myers, Fred C. Moore 3.
Oskamp Pool—Browning, Langston & Co. 3.
Unknown, Norris, Frazier & Co. 2.
Lecta Pool—Johnson, Samson Oil 3.
Walter Browning, Samson Oil 11, 12.
Nichols, Hunt, Leach & Mitchell 3.
Walter Browning, Hunt, Leach & Mitchell 4.
Earl Nichols, J. D. White & Co. 7.
Shirley, Sandals & Co. 2.
Sam Gooden, A. W. Ziegler 3, 4.
Williamson, White & Stombo 5.
Wells drilling, 22.

OHIO COUNTY
Wells Drilling

Hartford—Sally Early, Creek Drlg. 10.
Fannie Lake, Creek Drlg. 12.
E. G. Owen east 41-a, Daugherty & Co. 1.
Hill Rhodes, Daugherty & Co. 3.
Cora Wells, Daugherty & Co. 7.
J. C. Ellis, Ohio Oil 1.
Delilah Lake, Ohio Oil 3.
S. S. Phillips, Ohio Oil 3.
J. D. Davis, Ohio Oil 2.
Claud Farmer, Pet. Expltn. 3.
W. W. Moseley, Rex-Pyramid Oil 1.
Ivo Howard, White Plains O. & G. 4.
Howard hrs., White Plains O. & G. 6.
Wm. Wade, White Plains O. & G. 1.
Barr, Kelly, Short & Co. 1.
Ben Taylor, French & Co. 1.
Mary J. Elmore, Wood Oil 19, 20.
J. C. Ralph, Wood Oil 2.
J. C. Smith, Wood Oil 4, 5.
J. L. Stinnett, Rex-Pyramid Oil 4.
Jane Davis, Engel & Daugherty 1.
Ollie Ezell 80-a, Young & Lee 1.
Ollie Ezell, 50-a, Daily & Loman 1.
Ada Keith, James C. Ellis 2.
B. L. Gossett, James C. Ellis 2.
Oma Ware, Leeper Oil & Co. 1.
Near Deanfield, Deanfield Oil 1.
Everett L. Chapman, Engel & Daugherty 2.
Feemster, Miller & Damron 1.
Plus Taylor, Raydure & Richenbrough 1.
W. S. Howard, Smith & Lang 1.
A. P. Kelly 330-a, S. A. Russell 2.
B. G. Forte, Geo. Boles & Co. 1.
Marion Baker, Thresher & Shouse 1.
Mary E. Wilson, Earl Patton 4.
Joe Maiden, unknown parties 1.
Marion Moore, Ile Lang 1.
Wells drilling, 39.

DAVIESS COUNTY
Rig

Whitesville—Poor farm, Rowe Oil 2.

Wells Drilling

Whitesville—Near Panther, Ohio Oil 1.
F. F. Coomes, Pet. Expltn. 5.
Eli Corder, Duncan & Spence 2.
Henry Speak, Dr. Buckner & Co. 1.
Hayden, Dimmick Bros. 1.
John Roby, Leeper Oil 7.
J. M. Miles, Thompson & Co. 5.
Rigs, 1; wells drilling, 7; total, 8.

CUMBERLAND COUNTY
Well Drilling

Kettle Creek—Milt Smith, Smith & Smith 1.

CLINTON COUNTY
Well Drilling

Wolfe River—Pierce, McClintock, Reed & Heckathorn 11.

HANCOCK COUNTY
Rig

Pellville—C. H. Henning, E. M. Stebbins 1.

Well Drilling

Pellville—Alva Corley, H. L. Ogle & Co. 1.
Rigs, 1; wells drilling, 1; total, 2.

BUTLER COUNTY
Wells Drilling

Morgantown — W. A. Newton, Fowler, Abdrews & Hogan 1.
J. F. Harp, R. E. Lingenfelder 1.
Wells drilling, 2.

McLEAN COUNTY
Wells Drilling

Calhoun—W. G. Hayden, L. C. Young & Co. 1.
Geo. Barr, Marvin Jordan & Co. 1.
Wells drilling, 2.

HOPKINS COUNTY
Well Drilling

Southard—Chas. Hibbs, Indiana-Illinois Oil 1.

EDMONDSON COUNTY
Well Drilling

Mammoth Cave—John Poteet, Green River Oil 2.

WAYNE COUNTY
Wells Drilling

District 2—Huffaker, B. S. Huffaker 5.
H. E. Coffee, Somerset Oil 3.
District 3—Eli Phipps, John Dillon 2.
District 13—E. G. Guffey, Maesh & Hicks 1.
Wells drilling, 4.

LEE-OWSLEY COUNTIES
Wells Drilling

Island Creek—Dave Chadwell, Atlantic Oil Producing 1.
District 17—Darts & Short, Harris, Spence D. & T. 3.
District 18—Wiley Bryant, Cook & Co. 2.
District 20 — Sarah Vanderpool, Tipton & Tackett 3.
Childers, Crit Childers 5.
Wells drilling, 5.

ESTILL COUNTY
Wells Drilling

District 8—John Sparks, Breener, Adams & Co. 8.
John Goff, Breener, Adams & Co. 6.
Eliza Stacey, Breener, Adams & Co. 7.
J. D. Alexander, Superior Oil Corp. 22, 26, 27.
Wells drilling, 6.

WOLFE COUNTY
Well Drilling

District 9—O. F. Asbury, Superior Oil 7.

JOHNSON-MAGOFFIN COUNTIES
Rigs

District 27—W. L. May, S. J. Patrick 3.
Geo. Collins, Adams & King 1.
Frank Prater, Model Oil 4.
District 25—B. F. Conley, Reno Oil 9.

Wells Drilling

District 31—J. W. Frazier, Short Fork Oil 6.
Rigs, 4; wells drilling, 1; total, 5.

FLOYD-KNOTT COUNTIES
Wells Drilling

District 21—J. N. Allen, Ivyton O. & G. 1.
Helen Martin, Ivyton O. & G. 1.
Tom Turner, Ivyton O. & G. 1.
Woots Gearhart, Ivyton O. & G. 1.
Sada Allen, Distill-Martin O. & G. 1.
Oak Osborn, Distill-Martin O. & G. 2.
Wells drilling, 6.

KNOX COUNTY
Wells Drilling

Bailey Switch—Dizney, Dizney & McKee 2.
Sinking Creek—Foreman, Foreman Lumber 1.
Red Bird Creek—Beattyville parties 1.
Wells drilling, 3.

LAUREL COUNTY
Well Drilling

South of London—Standard Oil of Ky. 1.

McCREARY COUNTY
Well Drilling

District 3—Asher, Sampson & Co. 2.

TENNESSEE

CLAY COUNTY
Wells Drilling

Celina—John Pennington, Thos. Wimmer 1.
Chas. Short, Burman & Price 1.
S. Thurman, Whitenbit Gas 1.
C. A. Greenwood, E. G. Brandenburger & Co. 2.
Thos. Long, J. H. McClurkin 1.
Coulson, Koen & Co. 1.
Robt. Clark, Clark & Aber 1.
Davis, Bovaird & Shirk 1.
Bob Upton, J. L. Miller 1.
Lester Donaldson, H. C. Kraft 1.
Sidwell, Wittmer O. & G. 1.
Grady Sidwell, J. S. Aber 1.
Barlow Langford, J. S. Aber 2.
Arms, J. S. Aber 4, 5.
Keisling, J. L. Miller 4.
Waddle, Hughes-Rife Synd. 1.
Wm. Pennington, Ohio Oil 3.
Tidwell, Clark Bovaird & Shirk 1.
Turner Clark, Carnahan Oil 2.
Rich, Howard, Dooley & Clark 3.
John Clark, Bell Bros. 2.
Wolfe River, Pittsburgh interests 2.
Wells drilling, 23.

MACON COUNTY
Well Drilling

N.E. of Red Boiling Springs—Unknown 1.

OVERTON COUNTY
Well Drilling

Livingstone Pike—Timothy, Ohio Oil 1.

PICKETT COUNTY
Wells Drilling

Juetts Creek—Luther Martin, Bryson & Stinson 1.
B. C. Arney, Turner, Lewis & Co. 1.
Wells drilling, 2.

JACKSON COUNTY
Wells Drilling

Gainesboro—Unknown, W. S. Hughes 1.
Tom Draper, Pittsburgh O. & G. 1.
Lock Branch—W. R. Hawkins, Celina O. & G. 9, 10.
Flynn's Lick—Wittmer O. & G. 1, 2.
Free State, Dr. Brooks & Co. 1.
Wells drilling, 7.

TROUSDALE COUNTY
Well Drilling

Near Hartsville—Goad, Ohio Oil 1.

COFFEE COUNTY
Well Drilling

Near Belmont—Dr. C. E. Price, Tenn.-Ky. O. & G. 1.

PUTNAM COUNTY
Wells Drilling

Sinking Creek—J. A. Drake & Co. 1.
Buffalo Creek—Tenn.-Alabama parties 1.
Wells drilling, 2.

MISSISSIPPI

MONROE COUNTY
Rigs

Amory—West, Amory Pet. 1.
T. 13-7e—Mawk, L. B. Mawk 1.

Wells Drilling

Sec. 8-13-17—Hall, Amory Pet. 1.
Sec. 25-15-17—Frank Rye, Natl. G. & F. 1.
Sec. 25-15-19—Acker, Sutton Bros. 1.
Sec. 4-13-18—Croak, Buffalo O. & G. 1.
Rigs, 2; wells drilling, 4; total, 6.

FRANKLIN COUNTY
Rig

Jackson—Pearl River, New York parties 1.

COPIAH COUNTY
Well Drilling

Sec. 6-2-1n—Didlake, Olympia O. & G. 1.

KOSCUSKI COUNTY
Rig

Near Alta—B. B. Jones, unknown 1.

ITAWAMBA COUNTY
Rigs

Near Fulton—Due Steel Oil 1.
Near Hopewell—Ewing & McAlpin 1.
Sec. 16-10-10—Evans, Amory Pet. 1.
Rigs, 3.

SIMPSON COUNTY
Rig

Sec. 34-4-13—B. Livingstone & Co. 1.

Well Drilling

Sec. 15-2-4—Kendall, Graves-Jones interests 1.
Rig, 1; well drilling, 1; total, 2.

YAZOO COUNTY
Well Drilling

Sec. 25-13-1w—Reed, Freen Run Oil 1.

WASHINGTON COUNTY
Well Drilling

Sec. 30-14-19—Allen, Alhambra Oil 1.

TALLAHATCHIE COUNTY
Well Drilling

T. 32-6—Bardwell, Ned R. Rice & Co. 2.

MADISON COUNTY
Wells Drilling

Sec. 29-10-4e—Trolls, Transcontinental Oil 1.
Sec. 23-10-3e—McCracken, Roxana Pet. 1.
Wells drilling, 2.

STONE COUNTY
Well Drilling

Sec. 36-3-12—Near McHenry, Magic City Oil 1.

HINDS COUNTY
Well Drilling

Near Edwards—Baker & Co. 1.

RANKIN COUNTY
Well Drilling

Sec. 24-3-3—Bell Pine, D'Lo Development 1.

WEBSTER COUNTY
Well Drilling

Sec. 15-21-11—Hensley, Cumberland Oil 1.

LEAKE COUNTY
Well Drilling

Near Conway—Pittsburgh O. & G. 1.

LEE COUNTY
Rig

Sec. 14-8-6—Buffalo O. & G. 1.

NESHOBA COUNTY
Rig

Near Philadelphia—S. B. King & Co. 1.

ALCORN COUNTY
Rig

Near Corrinth—A. M. Keisker 1.

WARREN COUNTY
Well Drilling

Near Charleston—Rich & Co. 1.

JEFFERSON COUNTY
Well Drilling

Sec. 11-6n-1sw—S. W. Burkett, Brassfield Oil 1.

ALABAMA

MORGAN COUNTY
Well Drilling

Sec. 6-6-4—English, Decatur Oil 1.

HALE COUNTY
Well Drilling

Greensburg—Hale Oil 1.

SHELBY COUNTY
Well Drilling

Chelsea—Scott, Cooksey & Co. 1.

WILSON COUNTY
Well Drilling

Selma—Blue Belle Oil 1.

FRANKLIN COUNTY
Well Drilling

Sec. 28-18-14—Hobson, Pittsburgh O. & D. 1.

MARION COUNTY
Well Drilling

Sec. 29-11-14—Clark, F. J. McAlpin 1.

LAWRENCE COUNTY
Well Drilling

Near Dunville—Greater Huntsville O. & G. 1.

FLORIDA

MONROE COUNTY
Wells Drilling

Sec. 6-51-31—Florida Natural Resources 1.
T. 35-34—Biscoyne O. & G. of Miami 1.
Wells drilling, 2.

GLADES COUNTY
Wells Drilling

Sec. 3-38-2—Langford & Co. 1.
Sec. 5-38-22—Seminole Pet. Corp. 1.
Wells drilling, 2.

DADE COUNTY
Well Drilling

Sec. 19-54-35—Tamami Trail, Miami O. & G. 1.

JEFFERSON COUNTY
Well Drilling

Sec. 19-2-5e—Miller-Gossard, Southern States Oil 1.

LEON COUNTY
Well Drilling

Sec. 2-2-1e—Rhodes, Gulf Oil Dev. 1.

HERNANDO COUNTY
Well Drilling

Sec. 2-33-19—Unknown parties 1.

PASCO COUNTY
Well Drilling

Sec. 25-25-16e—Unknown parties 1.

OKEECHOBEE COUNTY
Well Drilling

Sec. 22-26-35 — Opal district, Preston & Gaines 1.

SARASOTA COUNTY
Well Drilling

Near Venice—J. Ringling, John Ringling 1.

HIGHLANDS COUNTY
Well Drilling

Near Seabring—Unknown parties 1.

NORTH CAROLINA

SAMPSON COUNTY
Well Drilling

Near Clinton—Jim Simmons, Orr Wherry & Co. 1.

ROCKY MOUNTAIN AREA

WYOMING

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Salt Creek	13	1,370	0	0	7	19	26
Big Horn Co...	0	0	0	0	1	5	6
Carbon Co. ...	0	0	0	0	2	12	14
Converse Co. ..	1	75	0	0	2	3	5
Fremont Co. ..	3	280	0	0	2	8	10
Goshen Co. ...	0	0	0	0	0	1	1
Hot Springs-Washakie Cos.	0	0	0	0	1	3	4
Hot Spgs. Co...	0	0	0	0	0	5	5
Johnson Co. ..	0	0	0	0	1	4	5
Natrona Co. ..	0	0	0	0	1	3	4
Niobrara Co. ..	0	0	0	0	1	3	4
Park Co.	0	0	0	0	5	21	26
Platte Co.	0	0	0	0	0	2	2
Sweetwater Co.	0	0	0	0	2	7	9
Sublet Co.	7	525	2	0	1	28	29
Uinta Co.	0	0	0	0	0	2	2
Washakie Co. ..	0	0	0	0	0	3	3
Weston Co. ...	4	58	0	0	3	7	10
Total Oct. ..	26	2,318	2	0	29	136	165
Total Sept. .	35	3,283	3	7	18	122	140
Difference ..	9	965	1	7	11	14	25

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cat Creek	2	80	0	0	0	4	4
Kevin-Sunburst	43	2,110	18	2	12	30	42
Miscellaneous..	15	0	12	3	7	63	70
Total Oct. ...	60	2,190	30	5	19	97	116
Total Sept. ..	75	1,208	30	16	21	102	123
Difference ..	15	982	0	11	2	5	7

COLORADO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Oct.	13	837	6	0	5	77	82
Total Sept.	11	209	5	0	6	76	82
Difference ..	1	628	1	0	1	1	0

NEW MEXICO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Oct.	13	150	11	1	15	104	119
Total Sept. ...	19	165	8	3	11	99	110
Difference ..	6	15	3	2	4	5	9

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Oct.	2	0	2	0	1	25	26
Total Sept. ...	3	0	3	0	3	24	26
Difference ..	1	0	1	0	1	1	0

WELLS COMPLETED

WYOMING

35-40-79 SW, Midwest Oil Co. 24-L 112
24-40-79 SW, Wyoming Associated 26 72
14-40-79 SW, Wyoming Asso. 6-L .. 200
24-40-79 SW, Wyoming Asso. 5 87
35-40-79 SW, Midwest Oil Co. 15 133
35-40-79 NE, Midwest Oil Co. 13-L ... 477
23-40-79 SE, Wyoming Asso. 13 5
34-40-79 NE, Wyoming Asso. 24 84
25-40-79 NW, Midwest Oil Co. 18-L .. 90
28-40-79 SE, Mosher-Folk Synd. 3 .. 55
26-40-79 NW, Wyoming Oil Fields 1 .. 80
35-40-79 SW, Midwest Oil Co. 22 25
34-27-113 California Pet. 7-F 247
27-27-113 California Pet. 4-L 38
34-27-113 California Pet. 4-H 100
15-26-113 Cortez, Texas Prod. Co. 1 .. dry
15-26-113 Davis, Texas Prod. Co. 1 .... dry
9-33-76 Whiteside, Continental Oil 50 75
15- 6- 2 Union Oil Co. of Calif. 17 .. 250
4-46-63 Bert Higgins 2 2
17-46-63 La Fleiche Oil Co. 11 35
8-46-63 Reserve Oil Co. 6 1
16-46-63 Wheadon Oil Co. 20 30
13-32-99 Dallas Dome Wyo. Oil F. 44 30
3-26-113 California Pet. 3-H 36
3-26-113 La Barge, Superior Oil Co. 3.. 44

Wells completed 26
Production 2318
Dry 2

COLORADO

Wells Completed

23- 4 -92 Parkinson, Texas Prod. 2 .. 648
33- 1n-70 Deines, Repollo Oil Co. 1 .. 4
5- 8s-102 Garmesa, Gypsy Oil Co. 1 .. abd
2-19 -70 Bone, Continental Oil 1 .. dry
10-21 -69 Walters, Continental Oil 2 .. dry
35-18 -70 Hall, Continental Oil 2 20
35-18 -70 Steinmier, Continental Oil 4 dry
8- 6 -86 Belle Dennis, Texas Prod. 3 dry
3-19 -70 DeWeese, Bent County Oil & Gas 1 110
Ute Res. Great Basin Oil Co. 3 50
6- 1n-102 Hunter Green, Western Oil Leasing 2 5
25-24 -61 Chas. Kapschull et al 1 .. dry

Wells completed 12
Production. 837
Dry 6

NEW MEXICO

Wells Completed

22-26-27 Rhoades, Texas Prod. Co. 1.. gas
4-20-34 Jackson, Texas Prod. Co. 1 .. dry
1-17- 9 Hancock, Midwest Ref. Co. 1 150
23-17-27 McClay, Eastland Oil Co. 1 .. dry
14-20-29 Rawson, Geo. F. Getty, Inc. 1 abd
25-17-26 Knulik, W. A. Stone Oil Co. 1 abd
27-17-27 Berry, Kelly et al 1 ..... abd
30-18- 8 Pettit, H. L. Williams 1 .... abd
2-31- 2 Azotea Oil Co. 1 ..... abd
16-30-11 State, Astec O'l Synd. 4 .... abd
14-29-11 Ransom, Mid-Continent Oil 1 dry
25-29-11 Wiltbank, Huerfano Oil Co. 1 dry
30-30-15 Bowman, San Juan Leaseholds 2 ..... dry

Wells completed 13
Production 150
Gas wells 1
Gas production 40,000,000
Dry and abandoned 11

UTAH

Wells Completed

23- 5-22 Ashley Creek, Midwest Exploration 2 ..... dry
14-15-10 McGee & Holmes 1 ..... dry

Wells completed 2
Dry 2

WYOMING

BIG HORN COUNTY

Rigs

24-56-98 Garland, Producers & Refiners 3.

Wells Drilling

29-56-97 Utah Southern Oil Co. 3.

Shut Down

24-56-98 Jess Crosby et al.
29-56-97 Utah Southern Oil Co. 1.
2-56-98 Allen Oil Co. 1.
24-51-93 J. E. Scanlon 1.
Rigs, 1; wells drilling, 5; total, 6.

CARBON COUNTY

Rigs

3-19-78 Ohio Oil Co. 6.
25-27-93 Zola Oil Co. 1.

Wells Drilling

2-19-78 H. & C., Ohio Oil Co. 12.
2-19-78 H. & C., Ohio Oil Co. 13.
2-19-88 Producers & Refiners Corp. 3.
7-26-89 Producers & Refiners Corp. 5.
7-26-89 Producers & Refiners Corp. 8.
26-26-87 Producers & Refiners Corp. 24.
25-26-87 Producers & Refiners Corp. 19.
16-28-81 Graybeal Syndicate 1.

Shut Down

14-20-88 Lake View Oil Co. 1.
28-26-86 Portland-Wyoming Oil Co. 2.
33-26-88 Producers & Refiners Corp. 2.
8-26-89 H. P. Nutting 1.
Rigs, 2; wells drilling, 12; total, 14.

CONVERSE COUNTY

Rigs

9-33-76 Crary, Texas Prod. Co. 34.
9-33-76 Whiteside, Continental Oil Co. 58.

Wells Drilling

5-31-70 Great Northern Oil Co. 1.
3-33-83 Fargo Western Oil Co. 30.
28-31-69 John Ackard 1.
Rigs, 2; wells drilling, 3; total, 5.

FREMONT COUNTY

Rigs

15-33-91 E. T. Glenn et al 1.
1-33-95 Alkali Butte, Texas Prod. Co. 1.

Wells Drilling

34-34-93 Producers & Refiners Corp. 1.

Shut Down

14-32-95 Producers & Refiners Corp. 7.
17-33-94 Winter & Baker 1.
27- 3- 1w Nelson et al 1.
27- 3- 1w Nelson et al 2.
27- 5- 3 Kinney-Coastal Oil Co. 1.
27-6n- 2w Maverick Springs Drlg. Co. 1.
30-1s- 2e Teton Petroleum Co. 1.
Rigs, 2; wells drilling, 8; total, 10.

GOSHEN COUNTY

Shut Down

24-26-62 Foreman Oil Co. 1.
Rigs, 0; wells drilling, 1; total, 1.

HOT SPRINGS-WASHAKIE COUNTIES

Rigs

26-43-91 Westland Oil Co. 1.

Wells Drilling

5-42-90 Avery, Utah Refining Co. 1.
24-43-91 Fort Collins, Utah Oil Ref. Co. 1.
Rigs, 1; wells drilling, 3; total 4.
36-43-91 State, Utah Oil Ref. Co. 2.

HOT SPRINGS COUNTY

Wells Drilling

2-44-96 McPherson et al 1.
17-46-98 Washakie, Ohio Oil Co. 1.

Shut Down

34-43-94 Wyoming-Montana Oil Co. 1.
7-46-98 Ohio Oil Co. 2.
18-46-98 Ohio Oil Co. 4.
Rigs, 0; wells drilling, 5; total, 5.

JOHNSON COUNTY

Rigs

20-48-82 Carter Oil Co. 1.

Wells Drilling

17-46-82 R. C. Tarrant et al 2.
10-41-80 Graves & Murphy 1.
7-41-82 Fairwax Oil Co. 1.

Shut Down

4-43-82 C. L. Sackett et al 1.
Rigs, 1; wells drilling, 4; total, 5.

NATRONA COUNTY

Rigs

6-40-79 Mosher et al 1.

Wells Drilling

16-28-80 Foreman Oil Co. 1.

Shut Down

4-29-81 Kinney-Coastal Oil Co. 1.
13-33-80 Henry Miller 2.
Rigs, 1; wells drilling, 3; total, 4.

SALT CREEK FIELD

Rigs

5-39-78 Carter Oil Co. 24.
23-40-79 SW, Midwest Refining Co. 22-L.
17-39-78 Argo Oil Co. 1.
7-40-78 Masher et al 3.
30-40-78 Continental Oil Co. 26-A.
12-39-78 Coombs Dev. Co. 36.
26-40-79 Midwest Refining Co. 19-L.

Wells Drilling

30-39-78 Teapot Oil & Land Co. 2.
25-40-79 NW, Midwest Refining Co. 16.
35-40-79 SW, Midwest Refining Co. 25.
14-40-79 SE, Midwest Refining Co. 18.
35-40-79 SW, Midwest Refining Co. 24-L.
22-40-79 Midwest Refining Co. 16.
24-40-79 Midwest Refining Co. 22.
26-40-79 Midwest Refining Co. 25.
35-40-79 SW, Midwest Refining Co. 15.
23-40-79 SE, Midwest Refining Co. 3-L.
23-40-79 NE, Midwest Refining Co. 33-L.
26-40-79 SW, Midwest Refining Co. 19-L.
26-40-79 SE, Midwest Refining Co. 21-L.

Shut Down

30-39-78 Teapot Oil & Land Co. 2.
7-39-78 Continental Oil Co. 21.
16-40-79 Mosher-Dyke Syndicate 35.
23-39-79 Evans Oil Co. 1.
34-40-79 Continental Oil Co. 35-A.
24-40-79 Midwest Refining Co. 6-L.
Rigs, 7; wells drilling, 19; total, 26.

NIOBRARA COUNTY

Rigs

30-36-62 Peterson, Buck Creek Oil Co. 1.

Wells Drilling

25-37-63 Delahoyde, Buck Creek Oil Co. 1.

Shut Down

13-35-62 John Malcolm 1.
17-39-60 Hollingsworth Bros. 1.
Rigs, 1; wells drilling, 3; total, 4.

PARK COUNTY

Rigs

3-47-100 Buffalo, Ohio Oil Co. 2.
32-52-100 Producers & Refiners Corp. 1.
4-50-100 Ohio Oil Co.
6-50-100 Batson, Ohio Oil Co. 1.
28-51-100 Wolverine Oil Co. 1.

Wells Drilling

13-51-101 Linco Pet. Co. 1.
33-51-100 Linco Pet. Co. 1.
22-47-100 Taylor, Union Oil Co. of Calif. 1.
23-51-100 Chapman et al 1.
7-51-100 Ferdig-Wyoming Oil Co. 1.
6-51-100 Wydoc Pet. & Expltn. Co. 1.
19-51-100 Ferdig-Wyoming Oil Co. 1.
28-51-100 Ferdig-Wyoming Oil Co. 1.
7-51-101 Klindt, Cody Pet. Co. 1.
16-51-100 State, Continental Oil Co. 1.
9-51-100 Rousch, F. G. Ostland 1.
6-57- 99 Henderson Prod. Co. 1.
18-51-100 Shaw, F. G. Ostland 1.
27-53-100 Pulley, Ohio Oil Co. 1.
27-53-100 NW, Ohio Oil Co. 5-A.
23-51-102 Half-Moon, F. G. Ostland 1.
24-48-103 Four Bear, Honolulu Oil Corp. 1.

Shut Down

24-51-101 Rosseau, Linco Pet. Co. 1.
11-49-102 Hungry, Noah F. Clark 1.
8-51-100 Ohio Oil Co. 1.
25-58- 98 V. M. Kirk 1.
Rigs, 5; wells drilling, 21; total, 26.

PLATTE COUNTY

Wells Drilling

13-25-66 E. A. Jacobs estate 1.

Shut Down

11-26-67 Bear Oil Co. 1.
Rigs, 0; wells drilling, 2; total, 2.

SWEETWATER COUNTY

Rigs

6-14-103 Tower Pet. Co. 1.
26-20-104 Producers & Refiners 1.

Wells Drilling

18-33-99 Tucker, Prairie Oil & Gas Co. 1.
11-26-90 Prairie Oil & Gas Co. 67-A.
15-26-90 Prairie Oil & Gas Co. 6-B.

Shut Down

11-26-90 Wyo-Ill. Producers & Refiners 9.
2-26-90 Utah Oil Ref. Co. 7.
11-26-90 Wyo-Ill. Producers & Refiners 5.
10-26-90 Prairie Oil & Gas Co. 61-A.
Rigs, 2; wells drilling, 7; total, 9.

SUBLET COUNTY

Rigs

8-27-113 SE, Midvale Oil Corp. 1.

Wells Drilling

21-27-113 Midwest Refining Co. 36.
34-27-113 California Pet. Corp. 6-C.
11-29-115 SE, California Co. 1.
34-27-113 California Pet. Corp. 4-G.
27-27-113 California Pet. Co. 3.
27-27-113 California Pet. Co. 5-D.
27-27-113 California Pet. Co. 5-B.
3-26-113 California Pet. Co. 2-I.
34-27-113 California Pet. Co. 7-G.
34-27-113 California Pet. Co. 5-J.
35-27-113 Associated Producers Synd. 1.
3-26-113 California Pet. Corp. 3-D.
10-26-113 Bird, Utah Ref. Co. 1.
15-26-113 Rainbow Oil Co. 2.
9-29-113 Beaver Pet. Co. 1.
27-26-113 McGinnis, Geo. W. Danley et al 1.

Shut Down

15-27-113 Denver-LaBarge O. & G. Co. 1.
18-27-113 Good & Nutting 1.
26-27-113 Britt et al 1.
22-27-113 Akin-Butte Oil Co. 1.
22-27-113 Akin-Butte Oil Co. 2.
33-27-113 Shidler Syndicate 1-B.
34-27-113 California Pet. Co. 8.
33-27-113 A. H. Squire 1.
3-26-113 California Pet. Co. 4.
15-27-113 H. H. Goddard 1.
1-28-113 Lackey et al 1.
7-28-111 Elkhorn-Western Slope Oil Co. 1.
Rigs, 1; wells drilling, 28; total, 29.

UINTA COUNTY

Wells Drilling

6-14-118 Olsen & Zimmerman 1.

Shut Down

10-14-118 A. R. Johnson 1.
Rigs, 0; wells drilling, 2; total, 2.

WASHAKIE COUNTY

Wells Drilling

13-46-89 Producers & Refiners 1.

Shut Down

31-48-90 Ohio Oil Co. 3.
31-48-90 Ohio Oil Co. 1.
Rigs, 0; wells drilling, 3; total, 3.

WESTON COUNTY

Rigs

5-46-63 Wyoming-Tana Oil Co. 4.
17-46-63 Euclid Oil Co. 11.
31-47-63 Euclid Oil Co. 12.

Wells Drilling

30-46-63 Glenn Oil Co. 12.
18-46-63 Hawkeye Supply Co. 3.
13-46-64 Hugh Updyke 7.
17-46-63 La Fleiche Oil Co. 10.
8-46-63 Reserve Oil Co. 5.
13-46-63 Wesco Oil Co. 2.

Shut Down

7-46-63 John O'Brien 1.
Rigs, 3; wells drilling, 7; total, 10.

NEW MEXICO

CHAVES COUNTY

Rigs

Wells Drilling

7- 5-29e Nels, McQuigg & McQuigg 1.
25-11-27 State, Buffalo-Roswell O. & G. 1.
18-31-31 Arena O.l Co. 1.
29-17-18 Wilson, tr., Texas Prod. Co. 1.
24-11-25 Miller, Lane, est. et al 1.

Shut Down

8-11-23 Forsyth, Gibson Oil Corp. 1.
11- 6-27 Fahrlander, Twin Mounds Oil Co. 2.
Rigs, 0; wells drilling, 7; total, 7.

COLFAX COUNTY

Wells Drilling

6-24-25 Logan, Frontier Oil Co. 1.

Shut Down

10-28-26 Moore, Red Feather Oil Co. 1.
Rigs, 0; wells drilling, 2; total, 2.

CURRY COUNTY

Wells Drilling

21-3-26 Hoskins, Clovis O. & G. Co. 1.
11-5-35 Sanders, Frio Oil Co. 2.
35-6-33 Scheurich, Petroleum Dev. Co. 1.

Shut Down

28-8-36 Laird, Bellview O. & G. Co. 1.
Rigs, 0; wells drilling, 4; total, 4.

DE BACA COUNTY

Shut Down

16-1-27 McAdoo, Navajo Oil Co. 1.
27-4-22 Triggs Syndicate 1.
6-4-20 Woods, Barber-Woods Oil Co. 1.
Rigs, 0; wells drilling, 3; total, 3.

EDDY COUNTY

Rigs

33-18-28 Henderson, Dexter & Blair.
35-17-27 Russell, Empire Gas & Fuel 4-A.
23-30-29 Hinkle, Geo. F. Getty, Inc. 1.
12-18-27 Cronin, Picher Oil & Gas Co. 4.

Wells Drilling

15-16-21 Miller, Hammond Oil Co. 1.
3-17-27 Daugherty, Ross & Grimm 1.
33-17-28 Yates, Pueblo Oil Co. 2.
3-18-28 State, Levers & Carper 5.
4-18-27 Mann, R. D. Compton 4.
25-16-31 Robinson, Texas Prod. Co. 2.
1-17-31 Gessert, Pueblo Oil Co. 1.
22-17-31 Lynch, Skelly Oil Co. 1.
32-22-27 Lenau, George F. Getty, Inc. 1.
13-19-26 Billings, Hamilton Pet. Co. 1.

Shut Down

21-28-28 Lackawanna O. & R. Co. 1.
2-18-27 State, R. D. Compton 3.
17-16-27 Lackawanna O. & R. Co. 1.
33-23-28 Community, Superior O. & G. Co. 1
21-17-30 McIntyre, Wooley & Jones 1.
13-22-29 Workman, Ohio Oil-Marland Oil 1.
1-18-27 Cronin, Manhattan Oil Co. 1.
1-18-28 Bruce Sullivan et al 1.
1-18-31 Lodewick, Apache Oil Co. 1.
30-18-30 Ogg, Kline et al.
Rigs, 4; wells drilling, 20; total, 24.

GUADALUPE COUNTY

Wells Drilling

10-3-17 Goard, Navajo Oil Co. 1.
24-8-24 Rutherford, Hanchett Oil Co. 1.

Shut Down

24-5-16 McMullen, Union Pet. Co. 1.
Rigs, 0; wells drilling, 3; total, 3.

HIDALGO, SAN MIGUEL, LUNA AND SIERRA COUNTIES

Wells Drilling

14-22-20 Beulah Oil & Gas Co. 1.
32-14- 2 State, Park Bowers 2.
20-21-10 State, Angelus O. & M. Co. 3.

Shut Down

14-15-16 Henry Dickerson.
Rigs, 0; wells drilling, 4; total, 4.

LEA COUNTY

Rigs

9-19-38 State, Midwest Refining Co. 1.
27-19-38 Hughes, Cecil Bordage et al 1.

Wells Drilling

4-17-34 State, Inglefield & Bridges 1.
25-19-35 Record, Exploration Co. 1.
15-27-32 Beardsley, Maljamar O. & G. Co. 1
5-22-38 Lockhart, Texas Prod. Co. 1.

Shut Down

20-11-33 Levers & Wilson et al 1.
27-11-34 Ward, Invader O. & D. Co. 1.
22-18-34 State, McDonald-Neal 1.
34-17-33 Wyatt, Henderson, Dexter & Blair 1.
Rigs, 2; wells drilling, 8; total, 10.

McKINLEY COUNTY

Rigs

12-17- 9 Producers & Refiners 2.

Wells Drilling

1-16- 9 Hannett, Jenkins Oil Co. 1.
12-16-10 Hogback Oil Co. 1.
30-18- 8 Pettit, H. L. Williams 2.
25-17- 6 Santa Fe Ry., Ohio Oil Co. 1.
15-16-10 Paramount Pet. Co. 1.
23-18-10 Gov't., Inland Oil Co. 1.
21-14- 9 S. Dysart et al 1.
9-17- 7 Carcia, Continental Oil Co. 1.

Shut Down

19-17- 9 Santa Fe Ry., Benedum & Trees 1.
15-17- 9 Hannet, Reliance Oil Co. 1.
20-14- 9 Union, New Mexico O. R. 2.
17-18-10 Cook & Beasley 1.
Rigs, 1; wells drilling, 13; total, 13.

QUAY COUNTY

Wells Drilling

24-7-29 Wells, Ohio Oil Co. 1.

Shut Down

25-8-32 Gibson Oil Corp. 1.
Rigs, 0; wells drilling, 2; total, 2.

RIO ARRIBA, SANDOVAL AND SIERRA COUNTIES

Rigs

18-16-1 Albuquerque O. & G. Co. 1.

Wells Drilling

32-14-2 State, Park-Bowers et al 2.
2-31-2 Azotea Oil Co. 2.
8-29-7 Hartman, Blanco O. & G. Co. 1.
Rigs, 1; wells drilling, 3; total, 4.

SAN JUAN COUNTY

Rigs

18-22-13 H. L. Hall et al 1.
14-29-11 Hare, Miller Brothers 1.
9-29-11 Lanier, T. C. N. Oil Co. 2.
24-29-11 Martin, Picture Cliff Oil Co. 1.
19-29-10 Aztec Dev. Co. 1.

Wells Drilling

34-29-11 Garland, Senate Oil Co. 1.
15-29-11 Finch, Aztec Dev. Co. 1.
17-29-13 Palmer, San Juan Pet. Corp. 1.
25-31-13 Hubbie, Portage O. & G. Co. 1.
2-29-19 Munoz, Continental Oil Co. 17.
29-30- 9 Terwilliger, Huntington Park Oil Co. 1.
23-29-11 James, R. M. Smith 1.
23-29-11 Abrams, R. M. Smith et al 1.
8-29- 9 Pine, Union O. & M. Co. 2.
30-30-15 Bowman, San Juan Leaseholds 3.

Shut Down

24-13-11 Attebury, Kans.-Colo. Oil Co. 1.
24-30- 9 Emery, Mansfield et al 1.
34-29-11 Garland, Messick & Howard 1.
22-30- 9 Herron, Coors-Harris 1.
11-29-11 Viles, Aztec Oil Co. 1.
11-28-11 Larson O. & M. Co. 1.
Rigs, 5; wells drilling, 16; total, 21.

SOCORRO COUNTY

Shut Down

30- 5- 1 Perrin-Swisher, N. Mex. Dev. Co. 1.
14- 3- 6 Stackhouse, Abo Oil Co. 1.
13- 6- 1 Arnold et al 1.
Rigs, 0; wells drilling, 3; total, 3.

TORRANCE COUNTY

Wells Drilling

7- 4-10 Riuhall Oil Co. 1.
20- 6-10 Randall, San Juan C. & O. Co. 2.
28- 3-13 Pinos, Alston et al 2.
31- 3-15 Renehan, Duran Dome Oil Co. 1.
12- 6- 7 Pace, F. S. Wilson, trustee 1.
12- 7- 7 DeHart, Sinnock Oil Co. 1.

Shut Down

32- 7-10 Minerman, San Juan C. & O. Co. 1.
7- 6- 8 Weber, Jones & Newbury 1.
36- 5- 6 Menzano, Navajo Oil Co. 1.
Rigs, 0; wells drilling, 9; total, 9.

UNION COUNTY

Rigs

4-22-32 Claphan, Amarillo Union Oil Co. 1.

Wells Drilling

27-24-33 Cook, Jas. R. Thomas 1.

Shut Down

14-24-30 Pasamonte, Sun State Pet. Co. 1.
Rigs, 1; wells drilling, 2; total, 3.

VALENCIA COUNTY

Rigs

13- 6- 2 Ball, Hub O l Co. 1.

Wells Drilling

32- 7- 2 Harland, Valencia Pet. Co. 1.
26- 6- 3 N. Mex.-Ariz. Land, Acme. Dev. 1.
25- 7- 2 Stone O. & D. Co. 2.
27- 7- 4 Santa Fe Ry., Acme Dev. Co. 1.

Shut Down

13- 7- 3 Sidello grant, N. A. Baker 1.
30- 6- 2 Grant, Gilmore-Sheldon 1.
Rigs, 1; wells drilling, 6; total, 7.

COLORADO

Rigs

14-4n-92 Milliken, L. L. Keith.
4-20-69 Templeton O. & G. Co. 2.
7- 9-68 Gault-Platt, Union Oil Co. of Calif. 4.
8-19-70 Alger, W. F. McCormick 1.
6- 9-68 Scott, Union O l Co. of Calif. 3.

Wells Drilling

34- 3-70 Prechtl, Left Hand Oil Co. 1.
32-1n-70 Nichols, Repollo Oil Co. 1.
7- 6-86 Adair, Texas Prod. Co. 4.
30-41-16 Moody Oil Corp. 1.
8- 6-86 Edwards, Texas Prod. Co. 2.
17- 6-86 State, Great Western Oil 1.
5- 6-86 Rule, Texas Prod. Co. 1.
30-10-68 Foster, Union Oil Co. of Calif. 2.
5- 6-86 McNeill, Texas Prod. Co. 2.
5-21-69 Slevin, Morrison Oil Co. 1.
35-18-70 Hunter Palmer, Overholtz Oil 1.
10-34-11 Aspaas, Jas. F. Collins Oil Corp. 1.
5- 1-70 Martin, Essok Oil Co. 1.
8-35-12 Olbert, Detroit Oil Assn. 1.
3-34-62 Malanaldo, Great Dome O. & G. 2.
34- 9-78 Hoye, Continental Oil Co. 1.
1- 9-79 Peterson, Continental Oil Co. 1.
2- 9-79 Pollock, Continental Oil Co. 1.
2-19-70 Shaw, Continental Oil Co. 1.
12-34-71 Ferguson, Klem Synd. 1.
31-10-68 Buckeye, Union Oil Co. of Calif. 6
32-34-56 Adams, Parker Club, Inc., 1.
11-30-60 Govt., Foley and Goldsworthy 1.
31- 7-81 Hitchins, Mountain & Johnson 1.
36- 8-55 State, Northeastern Colo. Oil Co. 1.
10- 4-91 Wick, Texas Prod. Co. 5.
16-12-100 State, Reiter-Foster O l Co. 1.
23- 4-92 Parkinson, Midwest Ref. 18-SD.
23- 4-92 Parkinson, Midwest Ref. 34-SD.
27- 4-92 Shaw, Midwest Ref. Co. 4-SD.
23- 4-92 Parkinson, Texas Prod. Co. 1.
33- 5-91 Basil Knowlton, Texas Prod. 10.
22-12-100 Kuykendall, Ohio Oil Co. 1.
31- 2-102 Emerald, Texas Prod. Co. 2.
23- 3-94 Freeman, Texas Prod. Co. 1.
27-41-10 State, Cook Weber et al 1.
5- 8-56 Platte Valley Pet. Co. 1.
31-11-79 Hunter, Seivard Oil Co. 1.
28-20-69 Travis, Pure Oil Co. 13.
20-33-61 McClung, California Pacific Gasoline Co. 1.
9-35-13 Hall, Coon-Cotton Synd. 1.
14- 1-66 Smith, Retter Oil Co. 1.
4-45-16 Gilmore Oil Co. 1.
12-23-50 Liggett, C. Frost Liggett 1.
10-29-69 Oak View, Huerfano Oil Co. 2.
28- 3-64 Watkins, Eman Oil Corp. 4.
7- 4-66 Fitzsimmons, McDeb Drlg. Co. 1.
5- 8-69 Besaw, West Side Dev. Co. 1.
33- 8-69 Warren, Poudre River Oil Co. 1.
24- 2-103 Amazon, Tidewater Asso. O l Co. 1.
24- 6-61 Patterson, Platte Valley Pet. Co.
34-17-70 Mutual Oil & Dev. Co. 1.
21-20-69 W. M. Conley 1.

Shut Down

26-34-48 Jones, Phillips-Middleton Synd. 1.
16- 3-91 Wymore, Marland Oil Co. 9-A.
23-33-12 Pulliam, Colo. Eastern-Erdman 1.
23- 8-104 Peerless, B. C. Morrison 1.
32-33-12 Hutchison, Miley Explin. Co. 1.
29-26-57 Bell Ranch, Reiter-Foster Oil 1.
28-18-70 Sheridan, Columbia Oil Co. 1.

34-32-56 Colorado Southern Oil Co. 1.
34-18-70 Renfrew, River Oil Co. 1.
13- 4-92 Camp, Moffat Pet. Co. 1.
24-1s-1e Holly Sugar, Eureka Oil Co. 1.
18- 6-86 State, Texas Prod. Co. 1.
1- 2-68 Orrison, Municipal Oil, Inc., 1.
11- 4-58 Jolly-U. P., H. H. Temple et al 1.
4- 6-59 Maher, Belmont Oil Co. 1.
33-18-60 Ritter, Boone O. & G. Co. 1.
26- 7-92 Boyles Oil Co. 1.
4- 7-86 Elkhead Dev. Co. 1.
28- 1-70 Odlum, Offset Oil Synd. 1.
16-10-69 Buckeye, Rollestone Oil Co. 1.
6- 7-68 Brown, Fifty-Four Oil Co. 1.
19-17-67 John Junior, Red Creek Oil Co. 1.
30- 2-70 Spurgeon, Boulder Pet. Co., Inc. 1.
25- 1-69 Everhart, Boulder Oil Co. 1.
16-23-52 State, Bent County O. & G. 1.
Rigs, 5; wells drilling, 77; total, 82.

UTAH
R-E
36-26-20 J. L. Shafer, Utah Southern Oil 1.
Wells Drilling
17-43-15 Mid-American Oil Co. 1.
6-27-21 Frank Shafer, Utah-South. Oil 1.
23- 5-22 Ashley Creek, Midwest Ref. Co. 3.
13-4s-6w Early, Midwest Explin. Co. 1.
30-40-19 Hughes, Midwest Explin. Co. 1.
34-25-21 Big Six, Embex Oil Co. 1.
28-41-19 Canyon, Utah-Southern Oil Co. 1.
16-30-25 State, Union Oil Co. of Calif. 1.
5-27-14 Shipley, Texas Prod. Co. 1.
27-21-19 Western States Dev. Co. 1.
W. of Vernal, Maud Ellen Oil Co. 1.
3- 9- 4 Diamond Oil Co. 1.
16-14-10 Price River Pet. Co. 1.
14- 9- 8 Leonora-Reddatz Synd. 1.
33rd St., Salt Lake City, Tower Pet. Co. 1.
18-43-15 Uzona Oil Co. 1.
23-41-12 Virgin Pet. Co.
Shut Down
36-31-17 Frances, Francis Oil-Utah Pet. 1.
17-34-25 Boulder Knoll O. & G. Co. 1.
1-30-20 Geoghegan, Utah Pet. Corp. 1.
16-26-20 Hazelwood, Utah-Southern Oil 1.
3-20-20 Rose, Desert Pet. Co. 1.
4-22-19 Crescent Eagle Oil Co. 1.
34-26-21 Utah Oil Dev. Co. 1.
31- 9- 7 Lakeside Oil Co. 1.
Rigs, 1; wells drilling, 25; total, 26.

MONTANA
CAT CREEK
Wells Drilling
27-15-30 SE, Chas. Devis et al 1.
Shut Down
21-15-30 SW, Canfield & Davis.
31-15-30 NE, Masser et al.
27-16-28 SE, J. D. Wilson 2.
Rigs, 0; wells drilling, 4; total, 4.
KEVIN SUNBURST
Rigs
15-35- 2 Emert, Ohio Oil Co. 5.
35-35- 2 Abell, Abell Oil Co. 3.
8-34- 1 Wilcox, Blue Sage Oil Co. 2.
8-35- 2 Gillis, Calgary-Sunburst Oils, Ltd.
32-35- 1 Calne, "56" Pet. Corp. 36, 37.
9-33- 1 Benjamin, Hardrock Oil Co. 1.
26-35- 2 Abell, Hardrock Oil Co. 6.
25-35- 3 Goeddertz, Maharg Oil Co. 3.
32-35- 1 Putnam, Mouse River O. & G. 6.
19-35- 1 Kalispell-Kevin, P. M. K. Oil 8.
31-33- 1 Lieberg, Sunburst O. & R. Co. 1.
Wells Drilling
33-35- 1 Haskins, Adams Oil Co. 15.
26-35- 2 Tembroek, Frazier et al 5.
26-35- 2 Abell, Hardrock Oil Co. 6.
27-35- 1 Kaston, Munger et al.
20-34- 1 Schmidt, Rose O. & G. 1.
35-36- 2 Shaw, Ohio Oil Co. 2.
4-35- 2 Baker, Ohio Oil Co. 12.
31-35- 1 Allen, Big West Oil Co. 26.
19-35- 1 Kalispell-Kevin, Arcus Pet. Co. 5.
28-35- 2 Lorensen, California Co. 16.
27-35- 2 Lashbaugh, Calif. Pet. Corp. 15.
25-35- 2 McKee, Calif. Pet. Corp. 5.
7-34- 1 Carlson, Dakota Montana 11.
32-35- 1 Caine, "56" Pet. Corp. 35.
36-35- 2 State, Homestake Explin. 42, 43.
15-32- 2 Johnson, Johnson & Johnson 1.
7-34- 1 Harte, Nat. Oil & Gas 5.
33-35- 2 Halloran, Regina-Kevin 5.
10-35- 2 Howling, Carter Oil Co. 4.
23-32- 2 Schanil, Babcock et al 1.
33-35- 1 Schacht, Ohio Oil Co. 4.
10-35- 2 Bruins, Tom Davis Synd. 5.
35-35- 2 Byrne, Munger O'Connell.
26-35- 1 Kaston, Stanley et al.
Shut Down
7-34- 1 Harte, National O. & G. Dev. 4.
29-30- 2 Ferring, Overseas Pet. Co.
32-36- 2 Stanton, Call-Mammoth 1.
28-36- 2 Kalmont Oil Co.
12-35- 2 Haugens, Gt. North. Royalty Co.
Rigs, 12; wells drilling, 30; total, 42.
MISCELLANEOUS
Rigs
29-26- 1 Bannatyne Oil Co.
24-25- 1 Lunckett et al.
29-35- 5 Brown, Rice Fulton 1.
1-34- 6 Yunk, Rice Fulton.
35-23-22 Flathead Pet. Co.
10-34- 3 Grandview, Sunburst O. & G. Co.
17-25- 1 Golfers Synd.
Wells Drilling
21- 6-35 SE, Selig Oil Co.
12-22- 3 Mann, Allen Oil Co.
27-22-15 Claggett Dev. Co.
13-17-23 Brown, Patterson et al 2.
12- 5-60 SW, Bull Dog O. & G. 2.
24- 7-24 NW, Manhattan Oil Co.
13-26- 2 Rouns, Calif. Pet. Corp. 1.
35-27- 1 SE, Pioneer O. & G.
9-10-39 Ralph Arnold 5.
20-37- 1 Clark, Montana Pacific.
12-35- 1 NW, Ferdig et al.
15-25- 1 Fidelity Oil Co. 1.
9-25- 1 Whitely, Lee Drlg. et al.
20-26- 1 California Pet. Corp. 1.
17-25- 1 Hardrock Oil Co.
8-27- 4 S. C. Ferdig.
16-27- 4 NW, Wm. Fulton 1.
21-27- 4 SE, Big West Oil Co.
29-25- 1 Reitz, Homestake Explin. Co. 1.
31-37- 6 Laird, Bears Den Oil Co.
32-34-15 Perkins & Jones.
17- 7- 1 NW, Madison County Oil Co.
13- 7-59 SE, J. C. Findlater
24- 1-21 Carbon, Record Pet. Co.
23- 2-16 NW, Shoshone Cons. Oil 1.
5-27- 3 Whiteside Synd.
12-25- 1 NW, Ferdig Oil Co.
36-25- 1 Bannatyne, Genou Oil Co. 3.
13-26- 2 Rouns, Calif. Pet. Corp. 1.
35-36- 1 Lewey, Zenith McDonald.
1-25- 1 Bannatyne, W. E. Elliott.
10-37- 5 Sheldon, Sunburst O. & G. 1.
34-33-12 Perkins, Equitable Oil Co.
20- 6-61 SW, Little Beaver O. & G.
10- 6-61 NE, Goodehope O. & G.
8- 7-60 SE, Cedar Creek O. & G.
33-15-25 NW, McDonald Creek Dev. Co.
11- 7-21 N. P., Ohio Oil Co. 1.
6-14-31 NE, Carroll & Parkinson 1.
35-12-22 McElwain Dev. Co. 2.
17- 7- 1 Madison O. & G.
26-21-17 Melton Corp.-Fenholt.
35-20- 2 Hiland Van Dale.
23-16-25 NW, Sol Stormwind.
32- 4-16 SW, Empire State O. & G.
Shut Down
7-25- 7 Federal, Mid Rocky Dev. Co.
25-14-28 Winnett Pacific 1.
3-22- 3 NW, Elk Horn Oil Co. 2.
34-22- 1 Great Northern Mutual.
33-16-28 NW, Ooakmont Pet. Co.
7- 8-57 Wolf Creek, California Montana.
28- 8-45 Montana Belle Oil Co.
21- 7-21 SW, Atlantic Oil Co.
13-17-23 Century Oil Co.
9-21-14 Glenhoim Oil Co. 2.
18-22- 3 SW, Elk Horn Oil Co.
9-18-26 Gould, Montana Major Oil, Ltd.
4- 2-25 SW, C. B. Minnemin.
1-27- 6 Goosebill, Julian Pet. Co.
25-21- 1 Ainsworth, Neudigate Interests.
17-31- 1 Dunkirk Oil Co.
27-36- 1 Kevin-Flathead Oil Co.
13- 3-22 NE, Broadview Synd.
Rigs, 7; wells drilling, 63; total, 70.

MONTANA
WELLS COMPLETED
10-15-29 SW, Mid Northern Oil 23.... 60
21-15-30 NE, F. M. Blake Royalties... 20
28-35- 2 Moe, Calif. Pet. Co. 14..... 200
27-35- 2 Smoke, California Co. 8..... dry
34-35- 2 Parker, California Co. 5..... dry
22-35- 2 M. M. Newman, Calif. Co. 8.. 10
32-35- 1 Caine, "56" Pet. Co. 31..... 75
32-35- 1 Caine, "56" Pet. Co. 33..... 15
20-26- 2 Loy Oil Co. 1..... dry
7-34- 1 Carlson, Dakota Montana 9.. 200
36-35- 2 State, Dakota Montana 40.... 40
17-35- 1 Rice, Dakota Montana 2..... dry
36-35- 2 State, Homestake Explin. 41.. 40
36-35- 2 State, Homestake Explin. 39.. 80
32-35- 1 Caine, "56" Pet. Corp. 32.... 75
28-35- 2 Lorensen, California Co. 16.. 500
9-32- 2 Howling, Homestake Explin. 7 125
30-33- 1 North. Nat. Gas Dev. Co. 1.. gas
20-34- 1 Adams, Elite Oil Co..... dry
13-34- 2 Harte, O'Haire-Sunburst .... dry
7-34- 2 Harte, Hannah Porter 2..... 600
8-34- 1 Wilcox, Blue Sage Oil Co.... 50
27-35- 2 Lorensen, Bi-State Oil Co. 1.. 20
12-34- 2 Storme, Armstead-West ..... dry
19-34- 1 Johnson, Chinook Synd. 1.... dry
34-35- 2 Lashbaugh, A. E. Crumley 7.. dry
21-35- 2 McManus, Hecla Sunburst 4.. dry
33-35- 2 Norum, Ohio Oil Co. 11..... dry
7-34- 1 Carlson, Dakota Montana 10.. dry
11-35- 2 Lind, Carter Oil Co. 5..... 35
19-35- 1 Kalispel-Kevin, P. M. K. Oil 7 45
23-35- 3 Maharg-Goeddertz 2-A 30
12-34- 2 Adams, Meows Oil Co. 250
32-35- 1 Caine, "56" Pet. Corp. 34.... 10
23-32- 2 Houdak, Shelby O. & G. .... gas
30-35- 1 Anderson, Western Drlg. Co. 6 25
33-35- 1 Schacht, Flickertail Oil Co. 5 110
7-34- 1 Russell, Diamond T. Rice 18.. dry
8-34- 2 Wilcox, General Oil Co. .... dry
33-35- 1 Haskins, Adams Co., trustee 15 25
31-35- 1 Adams, Caine-Adams 2 20
32-35- 1 Putnam, Mouse River O. & G. 5 ..... dry
30-35- 1 Stannard, Tri State Oil Co. 14 dry
19-33- 1 Cobb, Northern Nat. Gas Dev. Co. 1 ..... dry
31-35- 1 Allen, Big West Oil Co. 25.. dry
2-28- 3 NE, Dry Fork Oil Co. ..... dry
32-30- 2 Denzer, Drake Oil Co. ..... dry
36-26- 2 State, Calif. Pet. Corp. .... dry
23- 3-21 Little Basin, Prairie O. & G.. dry
23-36- 3 Red Top O. & G. ..... dry
34-26- 1 SE, Brittain DeSchon ..... dry
1-21- 1 NE, W. M. Elliott ..... dry
32-28- 2 Midway, Ralph Arnold et al.. dry
12- 5-60 SW, Bull Dog Oil Co. ..... dry
27-36- 2 SW, Mountain Chief Oil 2.. dry
29-37- 4 SW, Damerest, Patterson et al dry
20- 7-60 Gas Products Co. 19 ..... gas
36- 6-60 Minn Northern Power Co. 15. gas
10-11-57 SW, Johns & Haughens 3.... gas
25-11-24 NW, Baucher et al ..... dry

Wells completed 60
Production 2190
Dry 30
Gas 5

GULF COAST FIELDS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Austin	6	40	2	2	0	2	2
Brazoria	3	550	1	0	2	10	12
Chambers	2	700	1	0	5	4	9
Fort Bend	8	4,495	4	0	3	19	22
Hardin	1	0	1	0	1	8	9
Harris	10	4,275	3	0	4	18	22
Jefferson	17	19,200	5	0	3	20	23
Liberty	6	7,035	1	0	2	10	12
Matagorda	2	0	2	0	0	3	3
Orange	4	1,930	1	0	4	4	8
Wharton	12	300	12	0	1	2	3
Miscellaneous.	1	0	1	0	2	7	9
Acadia Parish	3	55	1	0	2	3	5
Calcasieu	12	6,410	0	2	3	16	19
Cameron	1	0	1	0	0	6	6
Misc. parish	1	0	1	0	0	7	7
Total Oct.	89	44,990	37	3	32	139	171
Total Sept.	71	25,269	29	1	26	140	166
Difference	18	19,721	8	2	6	1	5

WELLS COMPLETED
AUSTIN COUNTY
Kujewa, Humble Oil & Refining Co. 1.. gas
Thompson, Humble Oil & Ref. Co. 2 .. 35
Rammert, Humble Oil & Ref. Co. 1 .. dry
Gotoskey, Humble Oil & Ref. Co. 1 .. gas
Brinkmeyer, Pratt et al 1 ..... dry
Pomocal, Thompson et al 8 5
Production 40
BRAZORIA COUNTY
State Allen, Roxana Pet. Corp. 1 50
Schepler, Roxana Pet. Corp. 1 ..... dry
Wisdom, Rycade Oil Corp. 17 500
Production 550
CHAMBERS COUNTY
Kirby, Bennett Petroleum Corp. 9 700
Kirby, Mills Bennett 1 ..... dry
Production 700
FAYETTE COUNTY
Ida Fortran, Magnolia Pet. Co. 1 ..... dry
FORT BEND COUNTY
Bassett Blakely, Gulf Production Co. 15-C 95
T. W. Davis, Gulf Production Co. 35.. 2200
Wolf, Gulf Production Co. 4 ..... dry
Moore, Gulf Production Co. 13 ..... dry
Trone, Gulf Production Co. 4 ..... dry
Wheat, The Texas Company 2 1600
Fritz, Maier, Rycade Oil Corp. 4 600
Production 4495
HARDIN COUNTY
Paraffine, Paraffine Oil Co. 70 ..... dry
HARRIS COUNTY
Chapman-Bryan, Gulf Production Co. 14 dry
Hoffman-Gillard, Gulf Production Co. 8 125
Stateland Producers, Gulf Prod. Co. 11 30
Howe, Cullen et al 3 2500
Cain, Navarro Oil Co. 3 1000
Warren, Marland Oil Co. and Humble Oil & Ref. Co. 1 ..... dry
Ashbel-Smith, Humble Oil & Ref. Co. 4 30
Simms-Smith, Humble Oil & Ref. Co. 73 ..... dry
Settegast, Rio Bravo Oil Co. 2-B 200
P. S. A., Rio Bravo Oil Co. 6 400
Production 4275
JEFFERSON COUNTY
Fee, Magnolia Petroleum Co. 5 ..... dry
Fee, Magnolia Petroleum Co. 6 ..... dry
Gladys, Yount-Lee Oil Co. 43 3000
Gladys, Yount-Lee Oil Co. 38 1100
McFadden, Yount-Lee Oil Co. 41 360
McFadden, Yount-Lee Oil Co. 42 1000
McFadden, Yount-Lee Oil Co. 43 200
McFadden, Yount-Lee Oil Co. 44 ..... dry
McFadden, Yount-Lee Oil Co. 39 100
Fee, Yount-Lee Oil Co. 16 1800
Oakwood Realty Co., Gulf Production Co. 6 3000
Oakwood Realty Co., Gulf Production Co. 12 90
Gladys, Gulf Production Co. 226 150
Staiti, Freeport Sulphur Co. 1 ..... dry
Staiti, Freeport Sulphur Co. 2 ..... dry
McLean, Sun Oil Co. 14 4200
McLean, Sun Oil Co. 3200
Production 19200
LIBERTY COUNTY
Harrison, Navarro Oil Co. 10 15
Dolbear, Republic Production Co. 45.. 4000
Dolbear, Republic Production Co. 46.. 75
Palmer, Big Dome Interests 1 ..... dry
Hannah-Vacuum, The Texas Co. 5 2800
W. L. Thomas, Gulf Production Co. 11.. 150
MATAGORDA COUNTY
Kountze, Rycade Oil Corp. and Humble Oil & Ref. Co. B-2 ..... dry
Sanborn, Gulf Production Co. 3 ..... dry
ORANGE COUNTY
Lee Hager, Gulf Production Co. 15 .... dry
Peveto, Brownie-Babbatte Oil Co. 1 .. 30
Hager and Moore, Gulf Production Co. 19 100
State, Rycade Oil Corp. 11-B 1800
Production 1930
WHARTON COUNTY
Bay, Texas Gulf Sulphur Co. 1 ..... dry
Davidek, Texas Gulf Sulphur Co. 1 .... dry
Robbins, Texas Gulf Sulphur Co. 1 .... dry
Ueckert, Wallace & Miller 2 ..... dry
Bay, Weed Gayle Oil Co. 12 ..... dry
Bay, Weed Gayle Oil Co. 4 ..... dry
Feltz, Weed Gayle Oil Co. 14 ..... dry
Chase & Hughes, Gulf Prod. Co. 8 .. dry
Kostelink, Gulf Production Co. 1 ..... dry
McCarson heirs, Gulf Production Co. 3 dry
Banker, Hyde Production Co .1 300
Banker, Hyde Production Co. 2 ..... dry
Werner, Ingram Prospecting Co. 1 .... dry
Production 300
LOUISIANA GULF COAST
ACADIA PARISH
Houssiere, Yount-Lee Oil Co. 1 ..... dry
Latreille, The Texas Company 2-B 10
Fee, Abshire-Bolyard 2 45
Production 55
CALCASIEU PARISH
Miller, Vacuum Oil Co. and Gulf Ref. Co. 17 1100
Miller, Vacuum Oil Co. and Gulf Ref. Co. 18 1200
Bordages, Vacuum Oil Co. and Gulf Ref. Co. 5 150
Fee, Vacuum Oil Co. and Gulf Ref. Co. 1-A 300
Farquahar, Vacuum Oil Co. and Gulf Ref. Co. 5-A 700
Bordages, Vacuum Oil Co. and Gulf Ref. Co. 5 150
Rescue, Vinton Petroleum Co. 7 300
Gray, Vinton Petroleum Co. 60 10
Fee, Union Sulphur Co. 721 1200
Star-Vincent, Gulf Refining Co. 43 1100
Hunter, Rex Petroleum Co. 5 ..... gas
Production 6410
CAMERON PARISH
Mallard Bay, Border's 1 ..... dry
JEFF DAVIS PARISH
Buller, Elton Oil Co. 1 ..... dry
AUSTIN COUNTY
Wells Drilling
Pains, Humble Oil & Refining Co. 1.
Trenckmann, T. F. Woods 1.
BRAZORIA COUNTY
Wells Drilling
H. C. Hinckle, Starks et al 3.
Allen State, Roxana Pet. Corp. 1, 4.
Bell, Roxana Pet. Corp. 2.
Randon, Roxana Pet. Corp. 1.
Nash, Rycade Oil Corp. 12.
Perry, Gulf Production Co. 3.
Davidson, Texas Gulf Sulphur Co. 2, 3.
Proebstle, Texas Gulf Sulphur Co. 1.
Rigs
Pabst, Texas Gulf Sulphur Co. 1.
J. M. Muldoon, Rucks et al 1.
CHAMBERS COUNTY
Wells Drilling
Fisher, S. T. Hindman et al 1.
Kirby, Humphrey Corp. B-5.
Cade, McLean Oil Co. 10.
George E. Smith, Gulf Production Co. 2.
Rigs
Fisher, R. L. Bartlett 1.
Old River Lake, Pure Oil Co. 1.
Lost River, Pure Oil Co. 1.
Cade, McLean Oil Co. 6, 6-C.
FORT BEND COUNTY
Wells Drilling
Trone, Gulf Production Co. 5.
Wolf, Gulf Production Co. 5.
Davis, Gulf Production Co. 43, 44, 26.
Blakely, Gulf Production Co. 16-C.
West Schenck, Gulf Production Co. 12.
Robinson, J. S. Abercrombie & Co. 4, 3.
West Schenck, J. S. Abercrombie & Co. 4.
Blakely, Cunningham Production Co. 2.
Blakely, Gordon-Blakely 1.
Robinson, Navarro Oil Co. 3-B, 2-B.
Wisdom, Rycade Oil Corp. 16.
Fritz Maier, Rycade Oil Corp. 5.
J. R. Farmer, Sun Oil Co. 3.
H. R. Farmer, Sun Oil Co. 2.
Kasparek, Sun Oil Co. 1.
Rigs
Moore, Gulf Production Co. 14.
Blakely, Sam Watt 1.
Laferty, H. R. Cullen 1.
HARDIN COUNTY
Wells Drilling
Sterling, The Texas Company 1.
Hodges, Capitol Oil Co. 9.
Knight, Paraffine Oil Co. 43.
Honeymoon, Adabel Oil Co. 115.
Bates, East Batson Oil Co. 6.
Tabor, Gulf Production Co. 17.
Merchant, Orange Petroleum Co. 4.
Hardin Co., Lake View Oil Co. 29.
Rigs
Milhome, S. R. Buchanan 1.
HARRIS COUNTY
Wells Drilling
P. S. A., Rio Bravo Oil Co. 1, 7.
G. H. & S. A., Rio Bravo Oil Co. 1.
Prudential, Marland Oil Co. 4.
Humble fee, Smith et al 1.
Boyle, Associated Oil Co. 1.
Hume, Moody Oil Corp. 1.
H. M. Perry, Gulf Production Co. 1.
E. R. Taylor, Gulf Production Co. 19, 21, 22.
Warren, Marland Oil Co. and Humble Co. 2
Kitsman, Juanita Oil Co. 1.
Burt Griffith, Gulf Production Co. 1.
Chapman-Bryan, Gulf Production Co. 4.
Hoffman-Gaillard, Gulf Production Co. 14
Wright-A, Gulf Production Co. 21.
Freeman-State, Southern Explin. Co. 6.
Rigs
G. H. & S. A., Rio Bravo Oil Co. 101.
Marland, Leonard Petroleum Co. 1.
Higgins, Joe Basharat 1.
Fitzsimmons, Sun Oil Co. 1.
JEFFERSON COUNTY
Wells Drilling
Weed, Battleship Oil Co. 1.
McLean, Sun Oil Co. 6, 16, 17.
Price, Sun Oil Co. 4.
T. & N. O., Rio Bravo Oil Co. 58.
Fee, Magnolia Petroleum Co. 2-A, 7.
Gladys, J. O. Davis 2.
Marrs-McLean, Gulf Production Co. 16.
Gladys, Gulf Production Co. 227.
Jack & Duff, Gulf Production Co. 6.
Marrs-McLean A, Gulf Production Co. 10, 11
Daisy Roche, Gulf Production Co. 9.
McFadden, Deep Test Oil Co. 1.
Bordages, Gulf Production Co. 4.
Tyrell, Beaumont Oil & Prospecting Co. 1
Young, South Spindletop Oil & Dev. Co. 1
Crosby, Jim McMurry 1.
Rigs
McLean, Sun Oil Co. 11.
Staiti, Freeport Sulphur Co. 3, 4.
LIBERTY COUNTY
Wells Drilling
Dolbear, Republic Production Co. 43, 89.
Hannah fee, The Texas Company 4.
Merchant, The Texas Company 7.
Barngrover, Empire Gas & Fuel Co. 27.
Phoenix, Gulf Production Co. 87-29.
W. L. Thomas, Gulf Production Co. 10.
Quintette, Harrison Oil Co. 2.
Harvard, The Texas Company 1.
Rigs
Hannah-Vacuum, The Texas Company 7.
Harrison, Hull Oil Co. 7.
MATAGORDA COUNTY
Wells Drilling
Sanborn, Gulf Production Co. 4.
Hudson, Valley Oil Co. 1.
Kountze, Rycade Oil Corp. and Humble 5
ORANGE COUNTY
Wells Drilling
Brown, Sun Oil Co. 2.
Chesson, Texhoma Oil Co. 16.
Granger, Sinclair Oil & Gas Co. 4
Jackson, Supreme Oil Co. 2.
Rigs
State, Rycade Oil Corp. 13.
Hager & Moore, Gulf Production Co. 8
Lee Hager, Gulf Production Co. 19.
Carbello, Rex Petroleum Co. 6.
WHARTON COUNTY
Wells Drilling
Mensing, Ingram Prospecting Co. 1
Croom, Nall et al 1.
Rigs
Mullins, Southern Explin. Co. 1.
MISCELLANEOUS COUNTIES
GRIMES COUNTY
Wells Drilling
Cuthrell, J. Pundt et al 2.
JASPER COUNTY
Kountze Brothers, Raymond et al 1
MONTGOMERY COUNTY
Fitch, Brains et al A-1.
Nichols, Cordell-Lynn 1.
WALKER COUNTY
Thompson, Head & Thompson 1.
WALLER COUNTY
Flukinger, Fred Flukinger et al 1.
Garrett, J. R. Garrett et al 1.
JACKSON COUNTY
Rigs
Brushel, Wright Brothers 6.
MONTGOMERY COUNTY
Hardy, Johnson Hardy 1.
LOUISIANA GULF COAST
ACADIA PARISH
Wells Drilling
Rayne heirs, The Texas Company 2.
Crowley fee, Coastal Oil & Fuel Co. 95.
S. F. S., Port City Oil Co. 2.
Rigs
United Lands Co., Gulf Refining Co. 3.
Conklin, Evangeline Oil Co. 1
CALCASIEU PARISH
Wells Drilling
Paraffine, Hercules Oil Co. 3.
Wilson, Wilson-Broach 5.
Ecker, McDaniels & Ellis 1.
Lyons, Plummer Oil Co. 1.
Krause & Managan, West Edgerly Oil Co. 1
Higgins, Gulf Refining Co. 10-B.
Robert Lincoln fee, Gulf Refining Co. 3.
Rescue, Vinton Petroleum Co. 5.
Farquahar, Vacuum Oil Co. and Gulf Ref. Co. 3.
Bayou D'Inde, Vacuum Oil Co. and Gulf Ref. Co. 4.
Miller, Vacuum Co. and Gulf Ref. Co. 8.
Frieberg & Wolf, Vacuum Oil Co. and Gulf Ref. Co. 2.
L. M. Lumber Co., Gulf Refining Co. 7.
Industrial Lumber Co., Gulf Refining Co. 8.
Beckenstein, Dr. Kintze 1.
Dupree, Newton Drilling Co. 1.
Rigs
Miller, Vacuum Oil Co. and Gulf Refining Co. 19.
Gray, Marrs-McLean 12.
Gray, Vinton Petroleum Co. 52.

CAMERON PARISH
Wells Drilling
Sweet Lake, Pure Oil Co. 4, 5, 2, 3.
State Black Lake, Yount-Lee Oil Co. 5.
Caldwell, Calcasieu Oil Co. 2.

IBERIA PARISH
Wells Drilling
Schwing, Calcasieu Oil Co. A-1.
Broussard, Gulf Refining Co. 1.
State, Gulf Refining Co. 3.

LAFOURCHE PARISH
Wells Drilling
Dibert-Stark, Gulf Refining Co. 1.

ST. MARTIN PARISH
Wells Drilling
Atchafalaya, Rycade Oil Corp. 1.
Martin, Ohio Oil Co. 3.

ST. MARY PARISH
Wells drilling
Cote Blanche, Louisiana Explin. Co. 1.

EASTERN FIELDS

Summary of Wells Completed

Fields—	Comp.	Prod.	Dry	Gas
Allegany	48	94	2	2
Bradford	121	263	0	0
Middle Field	4	4	0	0
Venango-Clarion	23	20	1	7
Butler-Armstrong	10	1	1	2
Southwest Pennsylvania	8	12	0	3
West Virginia	79	135	17	41
Southeast Ohio	65	812	13	10
Total October	358	1,350	34	65
Total September	476	1,839	46	84
Difference	118	489	12	19

Summary of Work Under Way

Field—	Rigs	Drg.	Ttl.
Allegany	10	37	47
Bradford	21	77	98
Middle Field	0	2	2
Venango-Clarion	1	18	19
Butler-Armstrong	8	12	20
Southwest Pennsylvania	5	34	39
West Virginia	41	110	151
Southeast Ohio	29	83	112
Total October 31	115	373	488
Total September 30	106	350	456
Difference	9	23	32

WELLS COMPLETED
ALLEGHANY FIELD

Boyd & Jordan, L. E. Jordan 5 1
Boyd & Jordan, L. E. Jordan 5 ..... dry
Fee, H. W. Breckenridge & Empire, Ltd. 2
Fee, First Trust Co., Wvs. 92 et al 2
Lamphere, Mecca Natural Gas ..... gas
Fee, Herrick et al 2
Fee, Phillips & Howard 3
Cleveland, S. J. Cleveland et al 4
Fee, Empire, Ltd. 4
Reid, agent, First Trust Co. Wvs., First National Bank of Olean 3
Fee, G. W. & P. Birtell ..... gas
Fee, Robert J. Dermitt 1
Fee, L. W. Shaner et al 1
Fee, Isaac Willets estate 1
Fee, B. D. Turner 1 1
Fee, Cuba National Bank 25 1
Fee, E. L. McDevitt et al 4
McDermott, John K. Cochran et al .. 2
McDermott, John K. Cochran et al .. 2
Fee, LeSuer Oil Corp. 2
Fee, M. J. Crowley 2
Fee, Geo. H. Bradley 2
Fee, A-C-A Oil Corp. 2
Fee, Martin Bros. et al 2
Fee, W. J. Hughes et al 1
South Penn Oil et al, First Trust Co. Wvs. 92 2
Fee, Colegrove Oil Inc. 2
Ferrington, Colegrove-Labough et al .. 1
Fee, Forest Oil Corp. 312 1
Fee, Forest Oil Corp. 345 1
Fee, Forest Oil Corp. 401 2
Fee, Forest Oil Corp. 312 3
Fee, Forest Oil Corp. 319 3
Fee, Forest Oil Corp. 303 18
Tract 1, Hazelwood Oil, Alleghany 67 .. 1
Tract 1, Hazelwood Oil, Alleghany 05 .. 1
Tract 1, Hazelwood Oil, Alleghany 06 .. 1
McCaffery & Westran 1
Zeliff, Carmody & Fesenmyer 2
Multrus fee, C. M. Lippert et al 1
Fee, L. V. Forness et al 1
Fee, Andrews Oil 1
Brandel heirs, N. V. V. Franchot, mgr. trust 4
Lippert, Thropp & Bucher 1
Paton, M. Shear ..... dry
Carls, J. A. Gallets 1
Carls, J. A. Gallets 1
Fee, Kinley Producers 1

Wells completed 48
Production 94
Dry 2
Gas 2

BRADFORD FIELD

Lawton, Suhr, McSweeney & Co. 1
Fee, S. H. Elder 4 1
Bing. 428, J. A. Hooper 14 1
Bing. 391, George W. Bovaird 91 1
Rew. Bovaird & Hamlin 2
Bing. 4990, T. H. Kennedy 153 1
Bing. 490, T. H. Kennedy 154 2
Bing. 368, Wilson & Fitzgibbon 19 ..water
Elder, S. H. Elder et al 1
Petroleum Reclamation 3-D-1 6
Tyler fee, Forest Oil Corp. 208 12
Tyler fee, Forest Oil Corp. 206 13
Fee, Forest Oil Corp. 205 8
Bing. 400 acres, South Penn Oil 88 .. 1
Bing. Satt., South Penn Oil 127 2
Smith, South Penn Oil 07 .....pressure
Bing. 450-474, South Penn Oil 93 1
Bing. 533, South Penn Oil 92 1
Bing. 400 acres, South Penn Oil 87 .. 1
Culbertson lots, South Penn Oil 66 .. 1
Smith, South Penn Oil 152 1
Smith, South Penn Oil 153 1
Bing. 408, South Penn Oil 04 ....pressure
Lots 5 and 6, South Penn Oil 51 1
Bing. 439, South Penn Oil 102 1
Cotton, South Penn Oil 58 1
Cotton, South Penn Oil 011 .....pressure
Jones, South Penn Oil 238 1
Dent., South Penn Oil 115 1
N. W. M., ex. co. 2 per cent, South Penn Oil 05 .....pressure
Melvin, South Penn Oil 205 1
Melvin, South Penn Oil 206 1
Midland Taylor, South Penn Oil 44 1
Haven, South Penn Oil 29 1
Blair, South Penn Oil 59 1
Zimmer, South Penn Oil 06 1
Midland Keating, South Penn Oil 45 .. 1
Hooker, South Penn Oil 24 1
Jones, South Penn Oil 237 1
Jones, South Penn Oil 239 1
Kendall, South Penn Oil 68 .....pressure
Rumsey, South Penn Oil 76 .....pressure
Melvin, South Penn Oil 03 1
Davis, South Penn Oil 32 1
Haven, South Penn Oil 28 1
Hooker, South Penn Oil 23 1
Melvin, South Penn Oil 203 1
Melvin, South Penn Oil 204 1
Tract 1, Hazelwood Oil 71 1
Tract 23, Hazelwood Oil 103 1
Tract 25, Hazelwood Oil 20 1
Tract 22, Hazelwood Oil 43 1
Tract 27, Hazelwood Oil 138 1
Fee, South Penn Oil 1
Fee, South Penn Oil 1
Fee, South Penn Oil 1
Fee, J. V. Golden 1
Fee, Dunsmore & Co. 1
Fee, E. Daly 5
Franchot, F. M. Johnston & Son 1
Fee, J. A. Walters estate 5
Fee, T. H. Kennedy 1
Fee, T. P. Thompson Jr. 1
Fee, T. P. Thompson Jr. 1
Franchot, G. W. Crooks estate 2
Fee, South Penn Oil 4
Fee, South Penn Oil 2
Fee, South Penn Oil 1
Fee, South Penn Oil 1
Fee, South Penn Oil 2
Bingham, Hazelwood Oil 1
Bingham 400, South Penn Oil 4
Bingham, Hazelwood Oil 2
Hostetter estate, W. N. Hunter 2
Fee, South Penn Oil 1
Fee, South Penn Oil 1
N. W. Mining & Ex., South Penn Oil .water
Bingham 533, South Penn Oil 2
Bingham 439, South Penn Oil 1
Kane, Phoenix Oil 3
Fee, South Penn Oil 2
Bingham 394, Saph & Wright 2
Fee, Wilson & Fitzgibbon 2
Fee, T. H. Kennedy 6 1
Bingham 420, South Penn Oil 40
Bingham 408, South Penn Oil .....water
Bingham 589, Associated Producers .. 3
Fee, Johnson & Oil City Trust 3
Richardson, Hope Oil 2
Sill, Hope Oil 1
Fee, W. J. Healy 1
Bishop, Kendall Refining 2
Boyd, Whitehead & Carson 3
Fee, Skagg Bros. 4
Bingham, South Penn Oil 2
Borden, Jeutter Bros. 2
Kuhn, Davis Oil 5
Moore, C. H. Williams 3
Keating, Sloan & Zook 3
Borden, John Franks 1
Garlock, L. H. Smith & Sons 65 10
Burns Brothers, L. A. Mazza et al ..water
Fee, North Branch Oil .....water
Fee, North Branch Oil .....water
Rounds, N. V. V. Franchot, mgr. trust 10
Rounds, J. W. Kaufman 5
Rounds, J. W. Kaufman 6
Bingham estate, J. E. Karl & Co. ....water
Hamlin estate, J. E. Karl & Co. 1
Fee, Mix Creek Oil 2
Fee, Mix Creek Oil 2
Fee, Penn'a Oil Products Refg. 1
Fee, Penn'a Oil Products Refg. .....water
Ridell & South Penn Oil., Pollock et al.. 2
Ridell & South Penn Oil., Pollock et al.. 2
Weston, G. C. Rice et al 1
Weston, G. C. Rice et al .....water
Fee, L. G. Schenfield 2
Fee, L. G. Schenfield 2
Russell, C. E. Potter 2

Wells completed 121
Production 263
Water and pressure 16

MIDDLE FIELD

Water Co., Hanson & Johnson 1
Smith, McCool Bros. 1
Lot 60, Lesser & Laurer 1
Lot 37, T. J. Keenan 1

Wells completed 4
Production 4

VENANGO-CLARION

Hughes, M. S. Hughes 19 1
Gilmore, McCandles, Hundman et al 15 1
Hogue, John E. Hogue 4 1
Porter, E. A. Burch et al 97 1
Porter, E. A. Burch et al 98 2
Porter, E. A. Burch et al 99 1
Zimerman, Adam, H. T. & W. T. Zimmerman 10 1
Mathews, Plum Oil & Gas 1 2
Kapp, W. B. & F. E. Kapp 10 2
Kennerdell, J. L. Eakin 55 1
Lamb, Osborn, Hampton & Co. 17 1
Roe, John Diamond 10 1

Clarion—

Berlin, J. C. Hess 3 ..... gas
Rowan, C. H. Wedekind et al 2 ..... gas
Fisher, H. O. Fisher 2 2
Best, Cushing, White, Clicker et al 1 .. 2
Boone, Fogle Oil 2 1
Gribel, Samuel Gribel 6 ..... gas
Hefren heirs, Hefren heirs 2 ..... gas
Dechant, Hargenrader 1 ..... gas
Fee, Alum Rock Gas 3 ..... gas
Fasenmyer, Sigworth Bros. 1 ..... dry
Daum, Alum Rock Gas 4 ..... gas

Wells completed 23
Production 20
Dry 1
Gas 7

BUTLER-ARMSTRONG

Campbell, Mark W. Graham et al 12 .. 2
McKinney, Edward McKinney 6 1
Knox, J. S. Walker 1
Dombart, W. I. Gettman & Co. 1 2
Boggs, J. E. Dufford & Co. 1 ..... dry
Maley, M. C. Maley & Co. 1 1
McGuire, Wm. & McGuire 1 ..... gas
Lucas, Geibel & Co. 1 2
McCollough, W. M. Ruby et al 7 1
Wahl, L. Bishop et al 1 ..... gas

Wells completed 10
Production 10
Dry 1
Gas 2

ALLEGHANY FIELD
Rigs

Fee, Empire Gas & Fuel, Ltd.
Fee, Phillips & Howard.
Fee, L. W. Shaner et al.
Fee, M. J. Crowley.
McDermott, John K. Cochran et al.
McDermott, John K. Cochran et al.
Fee, LeSuer Oil Corp.
Fee, LeSuer Oil Corp.
Cass, W. B. Davidson et al.
South Penn Oil et al, First Trust Co. Wvs. 94 et al.

Wells Drilling

Boyd & Jordan, L. E. Jordan 5.
Boyd & Jordan, L. E. Jordan 5.
Reid, agent, C. O .& W. O. Taylor.
Fee, Empire, Ltd. et al.
Fee, Empire, Ltd.
Fee, Albert Oil.
Fee, Root & Perry.
Fee, Robert J. Dermitt.
Fee, Cuba National Bank 25.
Fee, Hardman & Hardman.
Fee, McDivitt et al.
Fee, McDivitt et al.
McDermott, John K. Cochran et al.
McDermott, John K. Cochran et al.
Fee, LeSuer Oil Corp.
Fee, E. L. McDivitt.
Newton & Hackett, Frost, Leifler & Frost.
Fee, A-C-A Oil Corp.
Fee, Martin Bros. et al.
Weatherby, Robert J. Dermitt.
South Penn Oil et al, First Trust, Wvs. 94.
Fee, Forest Oil Corp. 18, Lot 18.
Fee, Forest Oil Corp. 34, Lot 39.
Tract 1, Hazelwood Oil, Alleghany 08.
Harbel & Meridan, N. V. V. Franchot, mgr. trust.
Fee, Miller & Bovaird.
Fee, C. M. & F. J. Lippert.
Fee, Mary Lippert.
Fee, J. Miller et al.
McCaffery & Westran, Mrs. H. S. Westran.
Fee, H. C. E. W. Miller.
Fee, L. V. Forness et al.
Fee, W. F. Weidman.
Fee, John C. Minderler Jr.
Garr, Laura H. Garr et al.
Kinley Oil, Pure Oil, Inc.
Kinley Oil, Staley & Luke.
Rigs, 10; wells drilling, 37; total, 47.

BRADFORD FIELD
Rigs

Rounds, J. W. Kaufman.
Keating, First National Bank of Olean.
Fee, Penn'a Oil Products Refg.
Weston, G. C. Rice et al.
Bing. 428, J. A. Hooper 15.
Bing. 490, T. H. Kennedy 155.
Rew. Bovaird & Hamlin 21.
Redfield et al, South Penn Oil.
Fee, J. G. McCandless.
Fee, T. H. Kennedy.
J. B. Strong & Co., J. H. Hannon.
Fee, South Penn Oil.
Bingham, Hazelwood Oil.
Bingham, 184, Associated Producers.
Bingham 453, South Penn Oil.
Fee, South Penn Oil.
N. W. Mining & Exchange, South Penn Oil.
Bingham 4994, South Penn Oil.
Fee, South Penn Oil.
Bingham 453, South Penn Oil.
Bingham 408, South Penn Oil.

Wells Drilling

Fee, South Penn Oil.
Fee, South Penn Oil.
Fee, E. Daily.
Fee, W. T. Piper et al.
Fee, Hazelwood Oil.
Fee, T. P. Thompson Jr.
Fee, South Penn Oil.
Grimm, J. W. Abrams.
Bingham 150, South Penn Oil.
Fee, Hilliard & Dodge.
Bingham 179, Hazelwood Oil.
Bingham 538, C. P. Byron estate.
Bingham 570, South Penn Oil.
Bingham 494, South Penn Oil.
Bingham 88, South Penn Oil.
Bingham 398, South Penn Oil.
Bingham 439, South Penn Oil.
Bingham 576, South Penn Oil.
Elder, S. H. Elder et al.
Bing. 389, D. W. Daly 52.
Bing. 392, Hooper & Elder 28.
Tyler fee, Forest Oil Corp. 78.
Newell fee, Forest Oil Corp. 22.
Sims fee, Forest Pet. Corp. 1A41.
Fisher fee, Forest Pet. Corp. 2D21.
Drake fee, Forest Pet. Corp. 1G21.
Drake fee, Forest Pet. Corp. 1H32.
Niles fee, Forest Pet. Corp. 150.
Bing.-Satt., South Penn Oil 128.
Cotton, South Penn Oil 64, 65, 09.
Smith, South Penn Oil 151.
Lots 5 and 6, South Penn Oil 05.
Moody 57, South Penn Oil 04.
Bing. 439, South Penn Oil 104.
Culbertson lots, South Penn Oil 67.
Rew & Hodge, South Penn Oil 54.
Lots 5 and 6, South Penn Oil 06.
Brooks, South Penn Oil 02.
Hooker, South Penn Oil 25.
Davis, South Penn Oil 33.
Melvin, South Penn Oil 024.
Newell, South Penn Oil 023.
Bing. 88, South Penn Oil 16.
Jones, South Penn Oil 240, 241.
Midland Keating, South Penn Oil 46.
Hooker, South Penn Oil 26.
Kendall, South Penn Oil 69.
Tract 23, Hazelwood Oil 104.
Tract 27, Hazelwood Oil 193.
Tract 22, Hazelwood Oil 44.
Fee, Davis Oil Corp. (2 wells).
Weston, Mayrock Oil.
Burns Bros., L. A. Mazza et al.
Fee, Curtis & Dunlavey Bros.
Fee, G. W. Smith.
Rounds, N. V. V. Franchot, mgr. trust.
Richardson, Hope Oil.
Fee, W. J. Healy.
Boyd, Whitehead & Carson.
Fee, B. Derwin.
Bingham, South Penn Oil.
Rew, Bovaird, Gallup et al.
Jack, H. M. Jack et al.
Melvin, South Penn Oil.
Kulm, Davis Oil.
Baldwin, F. E. Baldwin.
Middaugh, A. L. & L. M. Lilly.
Borden, T. B. Wilson.
Borden, M. & W. L. Wasson.
Borden, John Franks.
Meldrum, A. H. Wiborg.
Emerson, G. L. Rhodes.
Garlock fee, L. H. Smith & Sons.
Rigs, 21; wells drilling, 77; total, 98.

MIDDLE FIELD
Wells Drilling

Ulf, Fidelity Petroleum.
Jennings, Titusville Trust 33.
Well drilling, 2.

VENANGO-CLARION

Zimmerman, Adam, H. T. & W. T. Zimmerman 11.

Wells Drilling

Columbia, Smith Brutsche et al 2.
McCalmont, W. L. & G. M. Hess 22.
Lamb, Osborn Hampton & Co. 18.
Hagerty, M. H. Hagerty 2.
Kapp, A. Kapp 4.
McLaughlin, Thomas McLaughlin 4.
Keverline, United Natural Gas 3,838.
Perrine, L. F. Perrine 17.

Clarion—

McCauley, Sigworth Bros. 1.
Moran, Beary & Co. 4.
Nick, Bashline & Kapp 1.
Kahle, A. D. Shorts et al.
Amsler, H. L. Conver & Morgan 1.
Dittman, Ryberg, Ashbaugh et al 1.
Wilson, W. W. Wilson.
Gribel, Sampel Gribel 7.

Mercer—

McKarney, Midway Oil & Gas 1.
Perrine, L. F. Perrine 16.
Rigs, 1; wells drilling, 18; total, 19.

BUTLER-ARMSTRONG

Boggs heirs, R. C. & W. V. Binkerd.
Fallssteadt, M. B. Cypher 1.
Marshall, R. A. Marshall 1.
Wurtz, R. A. Marshall 1.
Englehart, C. Pennell & Co. 1.
Smith, Dow Smith et al 3.
Bauldauf, Birckbichler & Co. 1.
Raisley, Washmuth & Co. 1.

Wells Drilling

Terwilliger, Donaldson & Co.
Lewis, Sloan, Rickard et al.
Jack, Beals & Freeman 4.
Dulity, Boyle, Maley & Co. 2.
Hickey, Greenwood et al 3.
Gillespie, Waltman & Co. 1.
Seybert, Seybert Bros. 1.
Ritzert, Ritzert Bros. 1.
Keck heirs, Fred Kroneberg & Co. 2.
Beck heirs, Frederick & Co. 1.
Jordan, McCormick et al 3.
Beam, Wm. Pfeffer et al 1.
Rigs, 8; wells drilling, 12; total, 20.

SOUTHWEST PENNSYLVANIA
WASHINGTON COUNTY
Wells Completed

Patterson, Wasco Fuel Co. 1 1
Day, N. G. Co. of W. Va. 1 1
Hunter, Carnegie Gas Co. 1 ..... gas

ALLEGHANY COUNTY

Ciao, Baughman & Rudert 1 ..... gas
Hiland, Walley & Co. 3 1
Carley, Robinson & Co. 1 1

BEAVER COUNTY

Roche, Hobbs & Co. 2 1
Bayless, Laughner O. & G. Co. 1 ..... gas

Wells completed 8
Production 12
Dry 0
Gas 3

WASHINGTON COUNTY

Patterson, Mfrs. L. & H. Co. 2.
Leonard, Wasco Fuel Co. 1.
Kinder, Carnegie Gas Co. 1.
Scenery Hill lot, Fletcher & Moore 1.
Scenery Hill lot, Roy Fletcher & Co. 1.
Scenery Hill lot, Dr. Ritter & Co. 1.
Scenery Hill lot, Roy Fletcher & Co. 1.
Hess, Fasinger Jordon 1.
Hill, Benedum & Trees 1.

ALLEGHANY COUNTY

Hardt, C. Hardt 2.
Hannah M.artin & Co. 1.
Wolf, John Nock & Co. 1.
Getty, Getty & Purdy Bros. 1.
Kale heirs, Fink O. & G. Co. 2.
Cook-Guyser, Cook & Guyser 1.

BEAVER COUNTY

Hites, Abrams & Co. 2.

GREENE COUNTY
Rigs

Fordyce, Carnegie Gas Co. 2.
Rutan, Carnegie Gas Co. 6.
Baldwin, Carnegie Gas Co. 2.
Ray, Nuso & McCloy 1.

Wells Drilling

Rose, Carnegie Gas Co. 1.
Cumberland Coal Co., Carnegie Gas Co. 2.
Blaker, Carnegie Gas Co. 1.
F. Blaker, Carnegie Gas Co. 1.
Knotts heirs, Peoples Gas Co. 1.
Fosmarnk, Peoples Gas Co. 1.
Fox, Peoples Gas Co. 1.
Fox, Phila. Gas Co. 1.
Johns, Phila. Gas Co. 3.
Zimmerman, Phila. Gas Co. 1.
Longanecker, J. L. Garard 5.
Sellers, M. & H. O. Co. 1.
Patterson, Carnegie Gas Co. 1.
Clutter, Carnegie Gas Co. 1.
Iams, Mfrs. L. & H. Co. 1.
Seals, Mfrs. L. & H. Co. 1.
Johnson, Waynesburg Home G. Co. 2.
Sprowls, Dutton Est. 1.
Clutter, Nuso & McCloy 1.
Rigs, 4; wells completed, 35; total, 39.

WEST VIRGINIA
WELLS COMPLETED
LEWIS COUNTY

Rohrbaugh, Hope Gas Co. 1 ..... dry

HARRISON COUNTY

Mitchell, D. Cork 1 ..... gas

MARION COUNTY

Hibbs, Owens B. & M. Co. 1 ..... dry
Tennant, Owens B. & M. Co. 1 ..... gas
Freeland, Owens B. & M. Co. 1 ..... dry
Moore, Pittsburgh and W. Va. G. Co. 1. gas
Tennant, So. P. O. Co. 4 ..... dry
Campbell, So. P. O. Co. 8 ..... dry
Koen, Clif.on O. & G. Co. 4 ..... dry

MONONGALIA COUNTY

Taylor, Randall Gas Co. 1 ..... gas

WETZEL AND TYLER COUNTIES

Oliver, Mfrs. L. & H. Co. 2 3
Long, Hope C. & R. Co. 1 ..... gas
Rogers, Cameron L. & H. Co. 1 ..... gas
Merritt, Hope C. & R. Co. 4 3
Hoge, Pittsburgh & W. Va. G. Co. 1.. gas
Morgan, Schamp & Co. 1 ..... gas

MARSHALL COUNTY

Blake, Lynn Camp O. & G. Co. 2 20
Main, Lynn Camp O. & G. Co. 1 ..... gas

DODDRIDGE COUNTY

Wanstreth, Broadwater & Wilson 1.... dry
Ford, Mfrs. L. & H. Co. 1 ..... gas

RITCHIE COUNTY

Daugherty, Carnegie Gas Co. 1 15
Hall, Locke & Co. 2 ..... gas
Smith, Pittsburgh & W. Va. G. Co. 1... gas
Reed, Pittsburgh & W. Va. G. Co. 2.... gas
Cougler, Davis & Co. 1 ..... dry
Dean, Trainer & Rittenhouse 5 ..... gas
Hill, Hope C. & R. Co. 1 30
Scott, Whan & Co. 1 ..... gas
Nes.er, So. P. O. Co. 2 ..... dry
Wilson, So. P. O. Co. 10 10
Cain, Hope Gas Co. 1 ..... dry
Grim, Park Bowser 1 ..... gas
Thomas, S. Rexroad 1 ..... gas
Hammons, Producers Supply Co. 5 4

CLAY COUNTY

Stockly, So. P. O. Co. 61 10

Stockly, So. P. O. Co. 60 15
Stockly, So. P. O. Co. 63 10
Reed, Ohio Fuel Oil Co. 1 8
Summers, Virginian G. & O. Co. 3 20
Henshaw, U. F. G. Co. 1 ..... gas
Salsbury, Warnock & Co. 3 ..... gas

GILMER COUNTY
Davis, Satterfield & Co. 1 ..... gas

WIRT COUNTY
Rathbone Oil Tract, Roberts Bros. 154. 2

WOOD COUNTY
Vaughn, S. L. Anderson 1 ..... dry
Ralston, Sweeney & Co. 1 5
Grant, So. P. O. Co. 2 ..... dry
Alleman, So. P. O. Co. 2 5

PLEASANTS COUNTY
Adams & Co., Keith Thompson 1 ..... dry
Naish, M. C. Martin, Jr. 1 1
Reynolds, So. P. O. Co. 18 18
Dennis, L. C. White 1 1
Severns, Ambler Oil Co. 16 ..... dry

CALHOUN COUNTY
Pell-Newman, Federal O. & G. Co. 40.. 5
Baughman, Brown & Co. 27 3
Stump, U. F. G. Co. 1 ..... gas
Bennett, Hope Gas Co. 10 ..... gas
Morris, Sycamore Fuel Co. 1 10
Price, G. L. Cabot 1 ..... dry
Stump, Chartiers Oil Co. 2 ..... gas
Minney, F. F. McIntosh 1 ..... gas

LINCOLN COUNTY
Sweetland, L. R. Sweetland 22 ..... gas
Sweetland, L. R. Sweetland 23 ..... gas

KANAWHA COUNTY
Painter heirs, Chartiers Oil Co. 1 ..... dry
Osborne, United Carbon Co. 17 ..... gas

BOONE COUNTY
Federal Coal Co., Pure Oil Co. 27 ..... gas
Coal River M. Co., Owens B. & M. Co. 34 gas
Roach heirs, Owens B. & M. Co. 2 ..... gas
Arbogast, G. L. Cabot 4 ..... gas
Seiler, Pittsburgh & W. Va. G. Co. 2... dry
Seiler, Pittsburgh & W. Va. G. Co. 14.. gas
Horse Creek C. & L. Co., U. F. G. Co. 18 gas
Money, Workman & Co. 1 ..... gas

MINGO COUNTY
Caldwell, Old Colony O. & G. Co. 2.... gas

CABELL COUNTY
Harshbarger, Harshbarger O. & G. Co. 5 gas
Morris, Pittsburgh & W. Va. G. Co. 1... gas
Plybon, Shipe & Co. 1 ..... gas

PUTNAM COUNTY
Sanders, Kirtley & Keller 3 ..... gas
Parker school lot, Kirtley & Keller 1.. gas
Morris, Hurricane O. & G. Co. 1 ..... gas

Wells completed 79
Production 135
Dry 17
Gas 41

LEWIS COUNTY
Rigs
Butcher, McCall Drilling Co. 1.
Ballard, Stanley Run Gas Co. 1.
Wells Drilling
Whelan, Smith & Co. 1.
Price, Cumberland & Allegheny Gas Co. 3.
Rinehart, Standard Gas Co. 1.

HARRISON COUNTY
Well Drilling
Gore heirs, Clarksburg L. & H. Co. 2.

MARION COUNTY
Wells Drilling
Morgan & Co., So. P. O. Co. 5.
Tennant, Hope Gas Co. 1.
Mayfield, V. Tennant 1.
Lambert, H. Tennant 1.
Arnett, C. L. Morris 1.
Tennant, Monroe & Laughlin 1.
Grim, Buffalo Oil Co. 1.
Efaw, Mfrs. L. & H. C. 3.
Tennant, Mfrs. L. & H. Co. 1.

MONONGALIA COUNTY
Wells Drilling
Johnston, Carnegie Gas Co. 1.
Tennant, Carnegie Gas Co. 1.

WETZEL AND TYLER COUNTIES
Rigs
Eddy, McIntyre Bros. O. Co. 1.
Hoge, So. P. O. Co. 3.
George, So. P. O. Co. 1.
White, So. P. O. Co. 1.
Hixenbaugh, Mfrs. L. & H. Co. 3.
Wells Drilling
Wade, Carnegie Gas Co. 1.
J. Wade, Carnegie Gas Co. 1.
Grim heirs, Morehead & Co. 1.
Lemasters, So. P. O. Co. 15.
Oberlin College, So. P. O. Co. 4.
Wycoff, Carnegie Gas Co. 1.
Henderson, Little Flower Oil Co. 4.
Price, Shimwell O. & G. Co. 1.
Ash, Sutton Bros. 2.
Roberts, Keystone Oil Co. 2.
Petty, Maxon Oil Co. 1.
Maple, S. N. Elliott 5.
Talkington, Carnegie Gas Co. 1.
Garrison, Albert Neeley 1.
Snider, Snider & Co. 1.

MARSHALL COUNTY
Rigs
Campbell, Denver O. & G. Co. 1.
Jocum, Spider O. & G. Co. 1.
Fry, Mfrs. L. & H. Co. 2.
Wells Drilling
Bonar, Decem Dev. Co. 8.
Newman, Wood & Co. 1.

DODDRIDGE COUNTY
Rigs
Maxwell, Trainer & Co. 1.
Pritchard, Pritchard & Co. 1.
Clay, S. W. Young 1.
Wells Drilling
Maxwell, Columbian Carbon Co. 2.
Rawlins, Murphy Oil Co. 7.
Davis, Carnegie Gas Co. 1.
Minear, Nay & Kintzner 1.
Cox, Ira D. Cox 3.
Moore, Braden & Co. 1.

RITCHIE COUNTY
Rigs
Lawrence, Hope Gas Co. 2.
W. Va. Tract, Whitwood & Co. 29.
McCullough, McCullough & Co. 1.
Bickerstaff, So. P. O. Co. 4.
Wells Drilling
Wanstreet, Pittsburgh & W. Va. G. Co. 1.
McCosh heirs, Wilson & Co. 1.
Collins, Hope Gas Co. 1.
W. Va. Tract, Wyatt & Co. 12.
Hickman heirs, Junior Oil Co. 1.
Stursburg, Ashton Oil Co. 6.
Bradford, Rice O. & G. Co. 3.
Barker, Rice O. & G. Co. 1.
Wilson, So. P. O. Co. 3.
A. Wilson, So. P. O. Co. 9.
Jordan & Co., Hope C. & R. Co. 2.
Hill, Hope C. & R. Co. 2.
Tingler, Deem & Co. 3.

CLAY COUNTY
Rigs
Stockly, So. P. O. Co. 62, 64.
Phillips, So. P. O. Co. 5.
Brown & Co., Virginian G. & O. Co. 21.
Brown, Goshorn & Butler, Virginian G. & O. Co. 2.
Allen, U. F. G. Co. 1.
Smith, G. L. Cabot 1.
Boggs, U. F. G. Co. 1.
Wells Drilling
Phillips, So. P. O. Co. 4.
Drake, U. F. G. Co. 1.
Edger, Morley O. & G. Co. 1.
Saylers heirs, Ogden & Geary 1.
Ross, Morley O. & G. Co. 1.
Booth, King O. & G. Co. 1.
King, Grace O. & G. Co. 7.
Bowman, Stephenson & Co. 2.

GILMER COUNTY
Rig
Tierney, James Tierney 3.
Well Drilling
Carr, Hope C. & R. Co. 1.

BRAXTON COUNTY
Rigs
Howell, Pittsburgh & W. Va. G. Co. 1.
Cook, Pittsburgh & W Va. Gas Co. 1.
Summers, So. P. O. Co. 6.
Wells Drilling
Bourne, Pittsburgh & W. Va. G. Co. 1.
Summers, So. P. O. Co. 4.

WIRT COUNTY
Well Drilling
Rathbone Oil Tract, Robert Bros. 155.

WOOD COUNTY
Rig
Masters, So. P. O. Co. 2.
Wells Drilling
Bills, Crepin & Co. 1.
Goff, Peter Smith 1.
Upton, T. Connelly 1.
Dye, So. P. O. Co. 1, 2.
Shattuck, So. P. O. Co. 23.

PLEASANTS COUNTY
Rig
Reynolds, So. P. O. Co. 17.
Wells Drilling
Morgan, Morgan & Co. 1.
Graham heirs, C. E. Park 2.
Farson, American Oil Co. 1.
Smith & Co., Riggs & Brown 4.
Templeton, Ambler Oil Co. 6.
Oliver, Oliver Oil Co. 1.

ROANE COUNTY
Rig
Starr, G. L. Cabot 1.
Wells Drilling
Vandale, Heck Oil Co. 1.
Tallman, Heck Oil Co. 2.
Harless, G. L. Cabot 1.
Horner, National O. & G. Co. 1.
Hildreth, G. L. Cabot 1.
Rigs
Stump heirs, G. L. Cabot 1.
Craddock, G. L. Cabot 1.
Starcher, Smith & Starcher 1.
Nitz, Calhoun O. & G. Co. 1.
Morgan-Fox, F. F. McIntosh 1.
Wells Drilling
Sturms, M. F. Crowley 2.
Bennett, G. J. Crowley 1.
Wolverton, W. H. Bickel 3.
Hardman, Hope C. & R. Co. 2.
Wilson, Lewis & Co. 1.
Brannon, Calhoun O. & G. Co. 1.
Mollehen, Steer Creek O. & G. Co. 1.
Slider, F. F. McIntosh 2.
Marshall, Carnegie Gas Co. 2.
Robison, Dailey & Son 1.

JACKSON COUNTY
Wells Drilling
Parsons, Ravenswood Co. 1.
Rarden, Morford & Co. 1.

LINCOLN COUNTY
Rigs
Roberts, Col. G. & E. Co. 1.
Oxley, Col. G. & E. Co. 1.
Wells Drilling
Sweetland, L. R. Sweetland 25.
Wiblie, L. R. Sweetland 24.
Kingrey, Kingrey Gas Co. 1.
Cooper, Ray & Son 2.
Behler, Rushman & Co. 2.
Sias, Ray & Co. 3.
Robert-Vandelinde, Wysong & Janes 2.

KANAWHA COUNTY
Well Drilling
Snyder, U. F. G. Co. 1.

BOONE COUNTY
Wells Drilling
Williams Coal Co., Pure Oil Co. 233, 234.
Brown, Owens B. & M. Co. 1.
Cassingham & Co., Owens B. & M. Co. 13.

MINGO COUNTY
Wells Drilling
Logan Cannel Coal Co., Old Colony O. & G. Co. 26.
Costerman estate, Old Colony O. & G Co. 16, 17.

CABELL COUNTY
Rig
Harshbarger, Big Two Mile Gas Co. 3.
Wells Drilling
Hatfield, Aetna O. & G. Co. 1.
Finley, U. F. G. Co. 1.
Alberts, Pittsburgh & W. Va. G. Co. 1.

PUTNAM COUNTY
Rig
Morris, Hurricane O. & G. Co. 2.

WAYNE COUNTY
Well Drilling
Furgeson, Chartiers Oil Co. 1.
Rigs, 41; wells drilling, 110; total, 151.

SOUTHEAST OHIO

WELLS COMPLETED
MONROE COUNTY
Jones, Jones & Co. 1 ..... dry
Bey, American N. G. Co. 1 ..... dry
Flesher, Howell & Co. 1 1
Sutter, Cline & Co. 3 ..... dry
Stephens, Sylviana Prod Co. 1 ..... gas
Givens, Sylviana Prod. Co. 6 2

PERRY COUNTY
Love, Ohio F. S. Co. 2 30
Folk, Wilson & Co. 1 ..... dry
Sunday C'k., C. C., Sunday C'k. Co. Co. 144 13
Cannon & Co., David L. Melick, tr. 2 .. 83
Tague hrs., Pure Oil Co. 2 80

HOCKING COUNTY
Hardin, Gordon Oil Co. 6 5
Riggs, Riggs Oil Co. 1 40
White & Co., Right O. & G. Co. 1 40
Mercer, Hope C. & R. Co. 2 10

GUERNSEY COUNTY
McCourt, Ohio F. S. Co. 5 10
McCourt, Ohio F. S. Co. 6 145
Lepage, Craig & Co. 1 20
Sheppard, C. E. Miller Co. 1 10

HOLMES COUNTY
Shay, Kemrow Co. 1 ..... dry
Ledbetter, Kemrow Co. 1 ..... gas
Miller, Ark. O. & G. Co. 4 60
Bell, Lydia Gas Co. 3 ..... gas
Casner, Ohio Oil Co. 1 ..... gas
Brillhart, Empire G. & F. Co. 1 ..... gas
Brush, Empire G. & F. Co. 1 ..... dry

LICKING COUNTY
Helphrey, Hope C. & R. Co. 1 104
Williams, Edmond & Co. 4 12
Myers hrs., Leonard O. & G. Co. 20 14
Gardner hrs., Steel C. Brown 1 ..... gas
Fleming, Hope C. & R. Co. 1 25
Vance, The Wehrle Co. 10 3
Osborn, Norpell & Patton 11 ..... dry
Boy Scout, Ralph Bros. 11 3
Miser, Ark. F. O. Co. 3 3
Rinehart, Margaret Oil Co. 2 1
Anderson, Ark. F. O. Co. 1 2
Sells, Preston Oil Co. 1 90

COSHOCTON COUNTY
Nyhart, East Ohio Gas Co. 3 ..... gas
Fender, Fender Oil Co. 1 3

MUSKINGUM COUNTY
Drake, Beerkhart estate 1 ..... gas

ATHENS COUNTY
State of Ohio, Athens State O. & G. 7 5
Maxwell, Gross & Co. 1 1
Gibson, West Frar O. & G. Co. 1 2
Mulligan, Werhle & Co. 1 ..... dry

MORGAN COUNTY
Hopkins, Cumberland Oil Co. 20 ..... gas
Joy, Ohio F. S. Co. 5 ..... gas
Woodyard, Woodyard & Co. 5 ..... dry

MEIGS COUNTY
Whilhamson, Ohio F. S. Co. 1 ..... dry
Rasp, Ohio F. S. Co. 1 ..... gas

WASHINGTON COUNTY
Holmes hrs., Johnston & Co. 70 2
Myers, Knowlton & Co. 4 10
Dana, Reckard & Co. 15 4
Reynolds, Todd & Co. 2 5
Herlan-Mendenhall, Bank of Marietta 38 ..... dry
Roland, Dailey & Co. 1 ..... dry
Schmidt, Patterson & Co. 7 3
Dyer, Bachelor Oil Co. 1 ..... dry
Hupp, Jerry Buckley 1 1

BELMONT COUNTY
Warren, N. G. Co. of W. Va. 6 10

JEFFERSON COUNTY
Hutterly hrs., Speer & Co. 1 10
Kellerman, Turner & Co. 11 2
Dinsmoor, Tope & Co. 3 2
Groves & Co., Bayes & Co. 14 5

COLUMBIANA COUNTY
Walters, Bennihoff & Co. 8 1

Wells completed 65
Production 812
Dry 13
Gas 10

MONROE COUNTY
Wells Drilling
Keys, Yester & Co. 1.
Hogue, Baker & Co. 1.
Neibel, Weber & Co. 4.
Stoffel, Shay & Co. 3.

PERRY COUNTY
Rigs
Tague hrs., Pure Oil Co. 3.
Mooney, Pure Oil Co. 1.
Wells Drilling
Alfred, Alfred & Co. 1.
Grove, Stewart & Co. 1.
Hutchinson, Hutchinson O. & G. Co. 3.
Hutchinson, Baughman & Co. 1.
West, Hope C. & R. Co. 3.
Thorp, Adair & Co. 1.
Tedrow, D. L. Melick, trustee 1.
Spring, D. L. Melick, trustee 1.
Starcher, Glendale O. & G. Co. 1.
Bennett, Cline & Co. 2.
Sowers, Cline & Co. 1.
Roush, Sturm & Co. 1.
Moore, Pure Oil Co. 1.
Teel, Wehrle & Co. 1.

HOCKING COUNTY
Rigs
Lemon, Tucker & Co. 1.
H. V. P. Co., Chartiers Oil Co. 206.
Wells Drilling
Horn hrs., Gordon Oil Co. 1.
Lane, Limelight O. & G. Co. 2.
Glanthlan, Wallsmith & Co. 1.
Tracy estate, Kachelmacher estate 24.
Roan, Roan O. & G. Co. 1.
Ralston, Columbus parties 2.

GUERNSEY COUNTY
Rigs
Hall, Ohio F. S. Co. 2.
Joyce & Co., Leonard O. & G. Co. 6, 7.
Micha, Davis Brothers 3.
Wells Drilling
Wigginton, Ohio F. S. Co. 1.
Joyce & Co., Leonard O. & G. Co. 4, 5.
Riddle, McSmith & Co. 1.
Denning, Blackstone & Co. 1.
Watson, Watson & Co. 4.
Ridgley, Pure Oil Co. 1.

HOLMES COUNTY
Rigs
Netherow, Empire G. & F. Co. 6.
Shuler, Palmer & Co. 3.
Bird, Empire G. & F. Co. 1.
Martin, Empire G. & F. Co. 2.
Strang, East Ohio Gas Co. 1.
Wells Drilling
Sandles, Kemrow Co. 3.
Snow, East Ohio Gas Co. 1.
Moore, East Ohio Gas Co. 1.
Manchester, Ohio F. S. Co. 1.
Watt, Empire G. & F. Co. 2.
Collins, Empire G. & F. Co. 1.
Miller, Ohio Oil Co. 1.
Mohler, Ohio Oil Co. 1.
Mosier, Ohio F. S. Co. 1.
Scott, O'Neil & Co. 1.
Kaylor, Ark. F. O. Co. 1.

LICKING COUNTY
Rigs
Phillips, Hope C. & R. Co. 5.
Baughman, Mead & Co. 1.
Wells Drilling
McCann, Pure Oil Co. 1.
Howell, Hope C. & R. Co. 1.
Vance, Wehrle & Co. 9.
Fulton, G. H. Long 1.
Howell, Ark. F. O. Co. 2.
Vanwinkle, Gordon Oil Co. 6.

COSHOCTON COUNTY
Rig
McKee, Spindler, Donnan & Co. 4.
Well Drilling
Mohler, East Ohio Gas Co. 1.

MUSKINGUM COUNTY
Well Drilling
Asnoires, Athey & Co. 1.

VINTON COUNTY
Wells Drilling
Valoer, Valoer Oil Co. 3.
Bedley, Cooperative Oil Co. 25.

NOBLE COUNTY
Rig
Roher, Young & Co. 1.
Wells Drilling
Harding, Ohio F. S. Co. 1.
Cline, Swisher & Co. 1.
Crock, Wickens & Co. 2.
Davis, L. A. Patton 4.
Fledner, Sailing & Co. 1.
Young, Robinson & Co. 2.

ATHENS COUNTY
Wells Drilling
State Lands, Athens State O. & G. Co. 8.
Maxwell, Wehrle & Co. 2.

MORGAN COUNTY
Wells Drilling
Coughill, R. G. Turney 1.
Pierpoint, Kemrow Co. 1.
Wilson, Kemrow Co. 1.
Wood, Kemrow Co. 1.
Beatty, Penn O. & G. Co. 1.
Huffman, Bowman O. & G. Co. 3.
Glass, Fox & Co. 2.
Finstwaldt, O. C. Dunn 16.

KNOX COUNTY
Rigs
Zimmerman, Ohio F. S. Co. 1.
Strang & Co., East Ohio Gas Co. 1.
Milton, East Ohio Gas Co. 1.
Wanders, East Ohio Gas Co. 1.

MEIGS COUNTY
Rigs
Roush, Summer O. & G. Co. 4.
Burnett, Coal Hollow O. & G C.o. 5.
Wells Drilling
Haudeshelt, Koehler & Miller 4.
Yost, Calderwood & Co. 1.
Swearinger, Calderwood & Co. 2.

WASHINGTON COUNTY
Rigs
Caldwell, Miracle Oil Co. 2.
Kauffman, Palmer & Co. 5.
Hall, Oneida Oil Co. 1.
Wells Drilling
Hayes, Carner & Riley 1.
Gravers, Hess & Sons 1.
Ward, Carner & Co. 1.
Palmer, Weir & Schramm 1.

BELMONT COUNTY
Wells Drilling
Graham, Dysart Oil Co. 1.
Wheeler, Powell & Co. 2.

JEFFFERSON COUNTY
Rigs
Stroud, Palmer & Co. 1.
Kellerman, Turner & Co. 12.
Lee, Sutton Brothers 1.
Well Drilling
Crawford, Williams & Co. 2.

CARROLL COUNTY
Wells Drilling
Harrington, N. G. Co. of W. Va. 2.
Dorance hrs., Brown, Vorhees & Co. 1.
Slates, Eaton & Co. 8.
Harding, Eaton & Co. 5.

COLUMBIANA COUNTY
Well Drilling
Benner, Renner & Deibel O. & G. Co. 20.
Rigs, 29; wells drilling, 83; total, 112.

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rig	Drlg.	Ttl.
Knox	1	0	0	1	1	4	5
Ashland	5	0	0	5	4	10	14
Medina	6	5	1	2	0	4	4
Lorain	0	0	0	0	1	5	6
Wayne	1	0	0	1	0	5	5
Holmes	5	83	3	1	4	12	16
Coshocton ...	6	98	1	3	1	2	3
Cuyahoga ...	11	0	1	10	1	15	16
Jackson	0	0	0	0	0	1	1
Summitt	0	0	0	0	0	3	3
Muskingum ..	0	0	0	0	0	1	1
Richland	0	0	0	0	0	1	1
Starke	0	0	0	0	0	2	2
Guernsey	1	0	0	1	0	8	8
Total Oct. ..	36	186	6	24	12	73	85
Total Sept. ..	49	186	5	35	14	76	90
Difference..	13	0	1	11	2	3	5

WELLS COMPLETED

KNOX COUNTY
Brown—E. M. Wander, H. E. Perkins 1. gas

ASHLAND COUNTY
Orange—J. McConnell, Ohio Fuel Gas 1. gas
Hanover—G. Handenschild, Ohio Fuel Gas 1 ..... gas
Sullivan—S. Sponsler, The Kemrow Co. 4 gas
Clear Creek—J. & T. Brown, The Logan Gas 1 ..... gas
Green—R. G. Marks, Ohio Fuel Gas 1... gas

Wells completed 5
Gas 5

MEDINA COUNTY
Lafayette—Jennie Stacey, Ohio Fuel Gas 1 ..... gas
John Lutsch, The Logan Gas 1..... gas
J. T. & R. Neiss, Empire Gas & Fuel 1 dry
Chatham—W. P. Wertz, E. R. Edson Son Co. 31 2
W. P. Wertz, E. R. Edson Son Co. 32 2
W. P. Wertz, E. R. Edson Son Co. 33 1

Wells completed 6
Oil wells 3
Production, oil 5
Dry 1
Gas 2

HOLMES COUNTY
Monroe—Jemima Bell, Lydia Gas 5..... dry
Wm. Miller, Arkansas Fuel Oil 4..... 83
Kilbuck—Chas. Shuy, The Kemrow Co. 1 dry
Knox—Frank Young, The Kemrow Co. 1 ..... dry
Richland—Frank Ledbetter, The Kemrow Co. 1 ..... gas

Wells completed 5
Oil wells 1
Production, oil 83
Dry 3
Gas 1

COSHOCTON COUNTY
Monroe—David Mohler, The Ohio Co. 1 5
John Kasner, The Ohio Oil 1 ..... gas
H. R. Brillhart, Empire Gas & Fuel 1 gas
H. A. Brush, Empire Gas & Fuel 1 ... dry
Newcastle—Stephen Sells, The Logan Gas 1 93
E. A. Rodeheaver, The Logan Gas 1 gas

Wells completed 2
Oil wells 2
Production, oil 93
Dry 1
Gas 3

WAYNE COUNTY
Congress—Wm. Swope, The Logan Gas 1 gas
CUYAHOGA COUNTY
Dover—Haas, Arthur & Simpson 1, 2.. gas
Geiss, Arthur & Simpson 1 ..... gas
Strongville—G. Beriswell, Dillon & McFrederick 1 ..... gas
J. A. & J. G. Pack, Dillon & McFrederick 2 ..... gas
W. C. Whitney, Empire Gas & Fuel 1 gas
Olmstead—W. D. Camp, Markle & Harrison 3 ..... gas
Don B. Hall, The Logan Gas 2 ..... gas
W. J. & C. Nelson, Arthur & Simpson 1 ..... gas
O. J. Paddock, Hulse & Kundtz 1 ... gas
M. Slamack, J. W. Cushing 2 ..... dry

Wells completed 11
Dry 1
Gas 10

GUERNSEY COUNTY
Monroe—Braniger, Russell Oil Producing 3 ..... gas
KNOX COUNTY
Rig
Clay—Jerry Foss, Guernsey & Co. 1.
Wells Drilling
Jefferson—Alvin Melton, East Ohio Gas 1.
Michael Strang, East Ohio Gas 1.
A. F. Zimmerman, Ohio Fuel Gas 1.
M. H. Adrian, Upham Gas 1.
Rigs, 1; wells drilling, 4; total, 5.
ASHLAND COUNTY
Rigs
Clear Creek—Hulda Shaw, The Logan Gas 1.
School House lot 1, Ringler & Co. 1.
J. E. Ringler, The Kemrow Co. 1.
Roy Dreher, Hulse & Kundtz 1.
Wells Drilling
Orange—E. H. Kestner, Ohio Fuel Gas 1.
Clayton Harrison, The Logan Gas 2.
Hanover—David F. Hay, The Logan Gas 1.
Sullivan—Ross Langford, The Logan Gas 2.
J. M. Slack, Hulse & Kuntz 1.
Clear Creek—W. H. Heiffner, Ringler & Co. 1.
J. C. Farquharson, Ringler & Co. 1.
Green—E. A. Beavers, The Logan Gas 1.
Troy—Ray Arnold, Hulse & Kundtz 1.
Ray Arnold, Buffenmyer, Devore & Co. 1.
Rigs, 4; wells drilling, 10; total, 14.
MEDINA COUNTY
Wells Drilling
Lafayette—Leon J. Reynolds, Ohio Fuel Gas 2.
Liverpool—Geo. Demling, The Logan Gas 1.
Hinckley—A. W. Hill, Ohio Fuel Gas 1.
Medina—C. L. White, Empire Gas & Fuel 2.
Wells drilling, 4.
LORAIN COUNTY
Rig
Columbia—G. & M. Brooks, Empire Gas & Fuel 1.
Wells Drilling
Penfield—J. R. Worcester, Hawk & Co. 1.
Columbia—R. R. Fitch, Ohio Fuel Gas 1.
J. & H. Longbon, Ohio Fuel Gas 1.
John H. Bartter, Ohio Fuel Gas 1.
Pittsfield—Wm. Neiding, Hawk & Co. 1.
Rigs, 1; wells drilling, 5; total, 6.
WAYNE COUNTY
Wells Drilling
Chester—H. P. Gable, Harmon & George 1.
Cannan—Samuel Wiles, Butler Bros. 1.
Congress—J. C. Cline, The Logan Gas 1.
Chas. F. Schutt, Palmer & Geisinger 1.
Chippewa—John Weintzheimer, East Ohio Gas 1.
Wells drilling, 5.
HOLMES COUNTY
Rigs
Hardy—Delpha Nethrow, Empire Gas & Fuel 6.
Monroe—Wm. Martin, Empire Gas & Fuel 2.
Stephan R. Williams, East Ohio Gas 2.
M. C. Bird, Empire Gas & Fuel 1.
Wells Drilling
Hardy—Wm. Watts, Empire Gas & Fuel 2.
Phillip Collier, Empire Gas & Fuel 1.
Geo. Schuler, Palmer & Geisinger 3.
Kilbuck—Wm. Sanders, The Kemrow Co. 3.
J. W. Moore, East Ohio Gas 1.
Knox—C. E. Kaylor, Arkansas Fuel Oil 1.
Daniel Mosier, The Logan Gas 1.
W. W. Scott, I. E. O'Hail 1.
John G. Stitzline, East Ohio Gas Co. 1.
Salt Creek—Adam Larch, Empire Gas & Fuel 1.
Prairie—Jacob E. Miller, The Ohio Oil 1.
Richland—Malissa Manchester, The Logan Gas 1.
Rigs, 4; wells drilling, 12; total, 16.
COSHOCTON COUNTY
Rigs
Monroe—C. L. Dalrymple, East Ohio Gas 1.
Wells Drilling
Monroe—D. & M. Mohler, East Ohio Gas 1.
Newcastle—Cassingham, Cassingham & Bell Bros. 19.
Rigs, 1; wells drilling, 2; total, 3.
CUYAHOGA COUNTY
Rigs
Strongville—H. M. & M. O. Whitney, Empire Gas & Fuel 2.
Wells Drilling
Dover—Harrison, J. W. Cushing 2.
Strongville—J. W. Dorsey, East Ohio Gas 1.
B. B. Haazlitt, John Arthur 1.
Olmstead—H. S. Nelson, Arthur & Simpson 1.
A. R. Kirk, Arthur & Simpson 1.
Geiss, 25-a, Arthur & Simpson 1.
J. E. Crawford, Arthur & Simpson 1.
M. Standen, Hulse & Kundtz 1.
O. J. Paddock, Hulse & Kundtz 2.
G. G. Kennedy, Hulse & Kundtz 1.
H. Paddock, Merkle & Harrison 1.
W. D. Camp, Merkle & Harrison 4.
W. D. Camp, 9-a, H. McClellan 1.
A. & A. Dreyer, Goff Bros. 1.
W. J. C. Nessen, McGrath & Co. 2.
Rigs, 1; wells drilling, 15; total, 16.
JACKSON COUNTY
Well Drilling
Franklin—W. L. Jennison, The Logan Gas 2.
SUMMITT COUNTY
Wells Drilling
Richland—C. J. Neil, John Arthur 1.
Franklin—Robt. Miller, East Ohio Gas 1.
L. Wolfe, East Ohio Gas 1.
Wells drilling, 3.
MUSKINGUM COUNTY
Well Drilling
Madison—W. C. Copland, The Logan Gas 1.
RICHLAND COUNTY
Well Drilling
Troy—Chas. Erhart, W. E. Slaughenhoupt & Co. 1.
STARKE COUNTY
Wells Drilling
Lawrence—James Nighter, Whittmer Property Oil & Gas 1.
Amos Hess, Stolz & Johnson 1.
Wells drilling, 2.
GUERNSEY COUNTY
Wells Drilling
Monroe—Henry Johnson, East Ohio Gas 1.
Henry McCleary, Russell & Hogan 1.
Coates, Russell Bros. 1.
Hughes lot, Cambridge parties 1.
O. M. Hughes, Ohio Fuel Gas 1.
Braniger, Russell Oil Producing 2.
Edinburn, Russell Oil Producing 2.
Elmer Read, Russell Oil Producing 1.
Wells drilling, 8.

LIMA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rig	Drlg.	Ttl.
Wood	2	10	0	1	2	1	3
Hancock	3	55	0	0	0	4	4
Allen	4	70	0	0	1	2	3
Auglaize	7	134	1	0	0	5	6
Sandusky	2	13	0	0	0	1	1
Mercer	3	17	0	0	0	3	3
Van Wert	0	0	0	0	0	2	2
Seneca	1	0	1	0	0	0	0
Lucas	0	0	0	0	0	2	2
Ottawa	1	0	0	1	0	0	0
Hardin	1	8	0	0	0	1	1
Darke	1	3	0	0	0	1	1
Wyandot	0	0	0	0	0	1	1
Total Oct.	25	318	2	2	3	26	29
Total Sept.	33	402	8	3	1	32	33
Difference	8	84	6	1	2	6	4

WELLS COMPLETED
WOOD COUNTY
Montgomery—A. F. Basey, Ohio Oil 1.. abd
Portage—M. Klotz, A. T. Carpenter 6.. abd
Perry—C. R. Rosendale, West Millgrove Gas 1 ..... gas
Webster—Geo. L. Dailey, W. J. Lyon & Co. 1 10
Troy—John Sherman, Ohio Oil 1, 2, 3, 4, 5 ..... abd
Linda H. Baker, Lemoyne Oil 2 ..... abd

Wells completed 2
Production 10
Gas 1
Abandoned 8

HANCOCK COUNTY
Pleasants—Sarah Rader, McClure & Schrack 5 25
Portage—J. H. King, N. W. Sayer 9 ... 10
Eagle—J. H. Haley, B. Porter & Co. 28. 20

Wells completed 3
Production 55

ALLEN COUNTY
Bath—Wm. B. Hall, Carman Oil 2 50
C. M. Lenney, C. A. Peavey 5 15
Spencer—Ed Reynolds, South Fork Oil 5 10
J. H. Burnam, Gwinn Oil & Gas 7 ... 4

Wells completed 4
Production 79

AUGLAIZE COUNTY
Logan—F. E. Zimmerman, Four Leaf Oil 2 40
G. Borin, J. F. Arnold 6, 7, 8, 9, 10.. a'd
M. A. Dingledine, Waller Oil 3 ..... abd
Douchouquet—J. F. Kohler, Henry Vossler 6 4
Washington—F. H. Bruckman, Brookside Oil & Gas 1 50
Wayne—Mary Rockwell, Arthur & Simpson 1 15
Noble—Joseph Whitney, Petroleum Producing 3 15
F. Jordon, Bowman Oil 1 ..... dry
L. Hoffman, Ohio Oil 9 ..... abd
W. Armstrong, First Nat. Bank of St. Marys 7 ..... abd
Salem—A. J. Gierhart, Stelzer & Boyd 7 10
William T. Seibert, Bachelor Oil 4 .. abd
Jacob Weimer, William Lang 4 ..... abd
W. Armstrong, William Lang 6 ..... abd

Wells completed 7
Production 134
Dry 1
Abandoned 11

SANDUSKY COUNTY
Jackson—Fanny Havens, Frank Haubert & Co. 3 5
Washington—Mary A. Hetrick, W. C. Richards 13 7
Scott—Ludwig & Ludwig, J. Parke Ludwig 2 ..... abd
Woodville—F. L. Moultier, Mountier Brothers 3 ..... abd

Wells completed 2
Production 12
Abandoned 2

MERCER COUNTY
Liberty—Henry Post, Henry Post 1 ... 1
Butler—J. G. Wenning, Cailey Myers 5 . 2
Union—Thomas Fierovid, W. B. Lawrence, Jr., & Co. 1 14

Wells completed 2
Production 17

VAN WERT COUNTY
Jennings—J. W. Baird, M. J. Lynch 3. abd
York—T. R. Hughes, M. P. Holt & Co. 7 abd

Abandoned 2

SENECA COUNTY
Eden—E. Deppen, Great Northern Oil 1 dry
LUCAS COUNTY
Oregon—Noah Ferry, C. O. McClintock 3, 4 ..... abd

Abandoned 2

OTTAWA COUNTY
Catawba—C. B. Hadden, Catawba Oil & Gas 1 ..... gas
Allen—Sarah Bunte, B. C. Gibbons 1 .. abd
Harris—Charles H. Magsig, Gust Magsig & Son 1 ..... abd

Wells completed 1
Gas 1
Abandoned 2

HARDIN COUNTY
McDonel—Mary Austin No. 2, Roundhead Oil & Gas 4 8
DARKE COUNTY
Missinewa—W. C. Disher, Cole Oil & Gas 18 3
John Myer, M. P. Colt 1, 2, 3 ..... abd
G. W. Reams, M. P. Colt 1, 2, 3, 4 .. abd
J. A. Gettinger, M. P. Colt 1, 2 ..... abd

Wells completed 1
Production 8
Abandoned 9

WOOD COUNTY
Rigs
Liberty—Eli Stockwell, Mattie S. Rouse 25.
Perrysburg—Catherine Smith, George L. Haubert & Co. 1.
Well Drilling
Webster—Michael Roller, John Geldin & Co. 2.
HANCOCK COUNTY
Wells Drilling
Pleasants—John A. Bryan, Bath Township Oil 1.
Portage—Isaac Hart, Mathias Brothers 13.
Eagle—Henry Deeds, B. Porter & Co. 21.
Biglick—C. S. Chambers, Ridge Gas & Oil Syndicate 4.
Wells drilling, 4.
ALLEN COUNTY
Rig
Bath—E. W. Prowant, C. A. Peavey 8.
Wells Drilling
Bath—E. M. Roberts, W. W. Bolz & Co. 1.
John M. Miller, H. F. Kelly & Co. 2.
Rigs, 1; wells drilling, 2; total, 3.
AUGLAIZE COUNTY
Wells Drilling
Logan—P. Ramaga, Wesley Sprague & Co. 1.
F. E. Zimmerman, Four Leaf Oil 3.
Washington—F. J. Kuckerman, Brookside Oil & Gas 8.
A. Dubois, W. E. Cooks & Co. 1.
Wayne—Harrison Goddard, Abbott Brothers 1.
M. Gossard, Arthur & Simpson 1.
Salem—Anna Weimer, Oh o Oil 8.
H. Miller, Charles Mertz & Co. 1
Wells drilling, 8.
SANDUSKY COUNTY
Well Drilling
Woodville—Gustav Magsig, Gustave Magsig 28.
MERCER COUNTY
Wells Drilling
Liberty—Brehm Brothers, Celina Petroleum 6.
Center—Dayton Fas, W. B. Lawrence & Co. 6.
Union—Thomas Fireovid, W. B. Lawrence & Co. 3.
Wells drilling, 3.
VAN WERT COUNTY
Wells Drilling
Liberty—John Chilcote, Chilcote Oil & Gas 3.
Washington—Frank Longenmyer, Syl. Metzger 1.
LUCAS COUNTY
Wells Drilling
Waterville—U. S. Denman, Waterville Gas & Oil 3.
Monclova—William Block, L. W. Vermyle, trustee, 2.
Wells drilling, 2.
HARDIN COUNTY
Well Drilling
McDonel—Earl Hiles, H. E. Schmidt 9.
DARKE COUNTY
Well Drilling
Mississinewa—J. Andrew Cox, J. G. Hoffman 1.
WYANDOT COUNTY
Well Drilling
Ridge—Andy Wells, Temple, Henry & Price 2.

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rig	Drlg.	Ttl.
Wells	0	0	0	0	0	1	1
Blackford	0	0	0	0	0	2	2
Jay	3	39	1	0	0	4	4
Adams	3	3	1	0	0	0	0
Grant	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	1	1
Gibson	5	30	3	1	0	5	5
Pike	3	15	0	0	0	4	4
Daviess	4	35	2	1	0	4	4
Sullivan	1	0	1	0	2	4	6
Vigo	3	215	0	0	3	3	6
Allen	0	0	0	0	2	2	4
Knox	1	13	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Benton	0	0	0	0	0	1	1
Johnson	0	0	0	0	3	0	3
Marion	0	0	0	0	0	1	1
Fountain	0	0	0	0	0	1	1
Martin	0	0	0	0	0	3	3
Monroe	0	0	0	0	0	1	1
Spencer	1	10	0	0	0	1	1
Bartholomew	0	0	0	0	0	1	1
Miami	0	0	0	0	0	1	1
White	0	0	0	0	0	1	1
Decatur	0	0	0	0	0	1	1
Montgomery	0	0	0	0	0	1	1
LaGrange	0	0	0	0	0	1	1
Tipton	0	0	0	0	0	1	1
Hamilton	1	0	1	0	0	0	0
Hancock	1	0	0	1	0	0	0
Harrison	1	0	0	1	0	0	0
Henry	0	0	0	0	0	1	1
Shelby	0	0	0	0	0	2	2
Wabash	0	0	0	0	0	1	1
Wayne	1	0	0	1	0	0	0
Total Oct.	27	370	9	5	10	52	62
Total Sept.	14	176	5	3	4	62	66
Difference	13	194	4	2	6	10	4

WELLS COMPLETED
JAY COUNTY
Bear Creek—C. E. Brinkerhoff, Waterloo Oil & Gas 6 30
A. Downing, Bert Strickler 1 9
Penn—A. C. Brown, R. & M. Oil 2 ..... dry

Wells completed 3
Production 39
Dry 1

ADAMS COUNTY
Wabash—John Brown, W. E. & C. H. McKelvey 1 5
Blue Creek—Ed Lugabill, Paul Schults Oil & Gas 4 3
Hartford—H. Egley, Maybier Oil 2 .... dry

Wells completed 3
Production 8
Dry 1

GIBSON COUNTY
Center—M. Eisler, Peoples Petroleum 1 dry
Dave Hutchinson, Mann & Huber 3 .. dry
Ross McElhiney, Mann, Huber & Young 2 ..... dry
Claud Novick, J. S. Young, Jr., & Co. 1 ..... gas
W. Steiner, Tichenour & Edmonds 1.. abd
Washington—Frank Lindsay, William Bell & Co. 1 30

Wells completed 6
Production 30
Dry 3
Gas 1
Abandoned 1

PIKE COUNTY
Logan—William Phillips, Wiser Oil 5.. 10
Madison—N. B. Coffman, Ohio Oil 8... 5
F. P. Robling, Ohio Oil 1, 2, 3 ..... abd

Wells completed 2
Production 15
Abandoned 3

DAVIESS COUNTY
Veale—Jess Swan, Hartman & Sargent 2 ..... dry
Otis Wildman, Hartman & Sargent 2 35
Delbert Barber, Hartman & Sargent 1 dry
Barr—Lincoln Walton, J. F. Arnold & Co. 1 ..... gas

Wells completed 4
Production 35
Dry 2
Gas 1

SULLIVAN COUNTY
Jackson—G. F. Patton, Ohio Oil 1 ..... dry
VIGO COUNTY
Prairie Creek—William Riggs, Siosi Oil Carp 2 90
William Riggs, Siosi Oil Corp. 3 25
William Riggs, Siosi Oil Corp. 4 100

Wells completed 3
Production 215

KNOX COUNTY
Harrison—C. Cooper, Murphy Oil 1 ... 18
SPENCER COUNTY
Jackson—Phillips, Premium Oil 1 10
HAMILTON COUNTY
Jackson—Stephan Cox, Sheridan Oil & Gas 1 ..... dry
HANCOCK COUNTY
Near McCordsville—Vernon Gas 1 ..... gas
HARRISON COUNTY
Boone—G. B. Melton, Louisville Gas & Electric 1 ..... gas
WAYNE COUNTY
Hagerstown—Teeters, Charles Teeters 1 gas
WELLS COUNTY
Well Drilling
Chester—Bertha Twibell, Lawrenceville Drilling 1.
BLACKFORD COUNTY
Wells Drilling
Washington—Frank Jones, Robert-Herman Oil Club 1.
Gerard, Master & Swain 1.
Wells drilling, 2.
JAY COUNTY
Wells Drilling
Bear Creek—C. E. Brinkerhoff, Waterloo Oil & Gas 1.
Pike—Charles and William Kent, Nick Masters 1.
Penn—Wabash Bank, George Northrup 1.
Knox—Earl Kessler, Knox Oil 1.
Wells drilling, 4.
GRANT COUNTY
Well Drilling
SE part county—Simon Leach, Fowlerton Oil & Gas 1.
RANDOLPH COUNTY
Well Drilling
Monroe—Joseph Meeks, Wesner & Co. 1.
GIBSON COUNTY
Wells Drilling
Center—John Hussey, Griggs & Co. 1.
Washington—J. E. Zimmerman, William Bell & Co. 2.
C. L. Muncey, William Bell & Co. 1.
Dora Edwards, Ohio Oil 2.
Montgomery—John Enlow, Enlow & Co. 1
Wells drilling, 5.
PIKE COUNTY
Wells Drilling
Logan—Pink Atkinson, Alex Singer & Co. 1.
Will Miley, J. Morrisey & Co. 1.
A. Atkinson, Perry C. Andrews 8.
Madison—Rufus Morgan, Ohio Oil 2.
Wells drilling, 4.
DAVIESS COUNTY
Wells Drilling
Veale—Emrick, Home Oil 1.
Reeves—Pat Nolan, Bell Brothers & Co. 1
Barr—Walker, Ruble & Collier 1.
SE part county—Robinson & Co. 1.
Wells drilling, 4.
SULLIVAN COUNTY
Rigs
Fairbanks—John R. Thomas, Siosi Oil Corp. 5, 6.
Wells Drilling
Fairbanks—John R. Thomas, Siosi Oil Corp. 4.
Nora Williams, Twin Creek Oil 1.
William Thomas, Baldwig & Whitlock 1.
Linton—Mary J. McDonald, J. B. Miller & Co. 1.
Rigs, 2; wells drilling, 4; total, 6.
VIGO COUNTY
Rigs
Prairie Creek—William Riggs, Siosi Oil Corp. 6, 7, 8.
Wells Drilling
Prairie Creek—William Riggs, Siosi Oil Corp. 2, 3.
ALLEN COUNTY
Maumee—D. Helmke, Robinson Brothers & Innis 3.
J. F. Butt, Estes, Manion & Co. 3.
Wells Drilling
Maumee—C. Reckeway, Cyrus Shoemaker 1
J. C. Garber, Jess Cochran & Co. 1.
Rigs, 2; wells drilling, 2; total, 4.
KNOX COUNTY
Well Drilling
Posey—John Keysar, Western Gulf Oil 1.
DUBOIS COUNTY
Well Drilling
Cass—William Meissner, Wheeler & Co. 1.
BENTON COUNTY
Well Drilling
Near Oliva—Jess Voliva, Chicago parties 1.
JOHNSON COUNTY
Rigs
Near Franklin—McQuiston, Universal Dev. 1.
William Lost, Franklin parties 1.
NE part county—Means, Unknown parties 1.
Rigs, 3.
MARION COUNTY
Well Drilling
Near Acton—Unknown parties 1.

FOUNTAIN COUNTY
Well Drilling
Troy—William B. Coffing, Pennsylvania parties 1.
MARTIN PARISH
Wells Drilling
Loogoottee—Kenner Dilley, Loogoottee Light & Heat 2.
McConn, Ruark & Co. 1.
Barket—Hart, B. J. Dinning 1.
Wells drilling, 3.
MONROE COUNTY
Well Drilling
Polk-Bloomington—Morgan, Saddle Creek Oil Co. 1.
SPENCER COUNTY
Well Drilling
Jackson—Doctor Hoover, D. D. Flannagan 1.
BARTHOLOMEW COUNTY
Well Drilling
Ohio—G. Lee, Granville Lee 2.
MIAMI COUNTY
Well Drilling
Near Convers—Unknown parties 1.
WHITE COUNTY
Well Drilling
Near Vernon—Thomas Spencer, Conrat Fatland 1.
DECATUR COUNTY
Well Drilling
Near Greensburg—Unknown parties 1.
MONTGOMERY COUNTY
Well Drilling
Near New Market—W. L. Lee, W. S. Peck & Co. 1.
LAGRANGE COUNTY
Well Drilling
SW of Lawrence—J. W. Crisler, J. W. Hunt & Co. 1.
TIPTON COUNTY
Well Drilling
Duck Creek—William Steele, Nash & Dean 1.
HENRY COUNTY
Well Drilling
Knightstown—Kahn, Knightstown Gas 1.
SHELBY COUNTY
Wells Drilling
Near Fairland—Walter Bass, Brandywine Oil & Gas 1.
Near Morristown—Unknown parties 1.
wells drilling, 2.
WABASH COUNTY
Well Drilling
Largo Township—Frank Lawson & Co. 1.

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clark	1	0	1	0	0	7	7
Cumberland	1	2	0	0	0	1	1
Crawford	3	5	1	1	0	7	7
Lawrence	2	35	1	0	0	2	2
Wabash	4	65	1	0	0	2	2
Marion	1	0	1	0	0	0	0
Morgan	0	0	0	0	0	1	1
Marshall	0	0	0	0	0	1	1
Macon	0	0	0	0	0	1	1
Madison	0	0	0	0	0	2	2
Shelby	0	0	0	0	0	1	1
St. Clair	0	0	0	0	0	1	1
Tazwell	0	0	0	0	0	1	1
McDonough	2	0	2	0	0	0	0
Adams	1	0	1	0	0	0	0
Total Oct.	15	107	8	1	0	27	27
Total Sept.	19	133	10	2	1	26	27
Difference	4	26	2	1	1	1	0

ILLINOIS
WELLS COMPLETED
CLARK COUNTY
York—J. E. Welch, J. Ellis & Co. 1 ... dry
CUMBERLAND COUNTY
Union—George Kuhn, Paul J. Campbell 2 ... 2
CRAWFORD COUNTY
Martin—J. S. Baker, H. D. Barker & Co. 1 ... dry
A. W. Mann, Frost Oil 1 ... abd
Robinson—McCarty lot, Robinson Gas 1 gas
Honey Creek—Cawood heirs, Selby-Cisler Producing 8 ... 5
Wells completed ... 3
Production ... 5
Dry ... 1
Gas ... 1
Abandoned ... 1
LAWRENCE COUNTY
Dennison—C. J. Borden, trustee, Ohio Oil 13 ... 35
S. B. Thompson, Smith & Co. 1 ... dry
Simon Seed, Big Four Oil & Gas 1 ... abd
McCloskey heirs, International Oil & Gas 8 ... abd
S. J. Gee, A. Bruner & Co. 6 ... abd
Petty—J. B. Steffy, Ohio Oil 2 ... abd
Wells completed ... 2
Production ... 35
Dry ... 1
Abandoned ... 4
WABASH COUNTY
Wabash—Joe Keyser, J. S. Young & Co. 6 ... 30
D. H. Price, J. S. Young & Co. 4 ... dry
M. Madden, Adams Corner Oil 12 ... 20
S. J. Stillwell, Wabash Oil 7 ... 15
Biehl heirs, T. L. Andrews & Co. 5 ... abd
Wells completed ... 4
Production ... 65
Dry ... 1
Abandoned ... 1
MARION COUNTY
Carrigan—Albert Sebastian, Mt. Vernon Dev. 1 ... dry
CLINTON COUNTY
Wade—A. Hempin No. 1, Ohio Oil 2 ... abd
W. & A. Kohrhoff, Ohio Oil 2 ... abd
Abandoned ... 2
McDONOUGH COUNTY
Bethel—D. E. Val, Zemple & Co. 1 ... dry
Lamoine—W. F. McCutchen, Ohio Oil 3. dry
Wells completed ... 2
Dry ... 2
ADAMS COUNTY
Gilmer—W. O. Powell, Weber & Cole 1 dry
CLARK COUNTY
Wells Drilling
Johnson-Norman Bennett, W. C. McBride, Inc., 1.
John Rathrock, W. C. McBride, Inc., 1.
Casey—D. C. Callahan, W. C. McBride, Inc., 1.
William Carper, William Carper & Co. 1.
Martinsville—Oral Cavolt, Rhodes & Keith 1.
Westfield—R. C. Wilhoit, Mann & Huber 1.
Darwin—Martin Wents, unknown 1.
Wells drilling, 7.
CUMBERLAND COUNTY
Well Drilling
Sumpter—S. Conel, Shrider & Co. 1.
CRAWFORD COUNTY
Wells Drilling
Martin—A. W. Mann, Frost Oil 7.
Montgomery—J. W. Armstrong, Hartman & Sargent 1.
J. F. Higgins, L. C. McWowell & Co. 1.
Prairie—Austin Price, Roger Dill & Co. 1.
Lamotte—I. Z. Buzzard, Hartman & Sargent 1.
Southwest—J. C. Martin, Embarrass Oil 1.
Licking—P. A. Matheney, Southerland & Co. 1.
Wells drilling, 7.
LAWRENCE COUNTY
Wells Drilling
Dennison—Laura Jenner, Ohio Oil 20.
Lufkin—B. Eason, Frank Ellis 1.
Wells drilling, 2.
WABASH COUNTY
Wells Drilling
Wabash—John Breen, Breen Oil 7.
William Price, Miller & Karns 2.
Wells drilling, 2.
MORGAN COUNTY
Well Drilling
Jacksonville—Travis, Timberlake & Higgins 10.
MARSHALL COUNTY
Well Drilling
Near Toluca—R. R. Irwin 1.
MACON COUNTY
Well Drilling
Hickory Point—A. Harris, Powers & Co. 1.
MADISON COUNTY
Wells Drilling
Namcoki—Goodrich Brothers, Goodrich Brothers 1.
Pine Oak—Gussenweiller, Assembly Oil & Gas 1.
Wells drilling, 2.
SHELBY COUNTY
Well Drilling
Holland—William Prosser, A. L. Ginter 1.
ST. CLAIR COUNTY
Well Drilling
Sec. 24-12-8w—E. S. Mason & Co. 1.
TAZWELL COUNTY
Well Drilling
Sec. 2-26-34w—J. L. Palmer & Co. 1.

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Rigs	Drlg.	Ttl.
Saginaw	27	270	5	0	7	7
Shiawassee	3	0	3	0	1	1
Gratiot	3	0	3	0	0	0
Huron	0	0	0	0	3	3
Livingstone	0	0	0	0	1	1
Muskegon	1	0	1	0	1	1
Crawford	0	0	0	0	1	1
Iosco	1	0	1	0	0	0
Wayne	1	0	1	0	0	0
Charlevoix	0	0	0	0	1	1
Macomb	0	0	0	0	1	1
Midland	0	0	0	0	1	1
Roscommons	0	0	0	0	1	1
Arenac	0	0	0	0	1	1
Sanilac	0	0	0	0	1	1
Isabella	0	0	0	1	0	1
Van Buren	1	5	0	0	1	1
Mason	1	0	1	0	0	0
Newaygo	1	0	1	0	0	0
Alpena	0	0	0	1	0	1
Total Oct.	39	275	16	2	21	23
Total Sept.	24	272	6	3	49	52
Difference	15	3	10	1	28	29

Wells Completed
SAGINAW COUNTY
Saginaw—Campau, Jack Henderson & Co. 3 ... 20
Wickes, Wickes Brothers 3 ... 20
Whittier, Wells-Schmidt Co. 5 ... 20
Fisher, Ohio Fuel Corp. 6 ... 7
Brechtelsbauer, Myron E. Lee 5 ... 8
Foot State Street, Local Petroleum 1. dry
Doctor Bradshaw, Sun Oil 4 ... 10
George Kuck, Sun Oil 4 ... 7
Louis Voight, Sun Oil 5 ... 10
Eddy estate, Saginaw Prospecting 5.. 20
Eddy estate, Saginaw Prospecting 6.. 20
M. Frantz, Ohio Oil 2 ... 7
Hermansau-Madison Sts., Fordney Petroleum 1 ... 15
Reed-Pleasants Sts., Fordney Petroleum 1 ... 12
Fred H. Gardner, Fordney Petroleum 1 15
Ash-Schaefer Sts., Cross Petroleum 1 12
Ash-Hermansau Sts., Cross Petroleum 1 ... 10
Fred Engle, Bliss Petroleum 2 ... 5
C. R. Phillips, Barker Oil & Gas 1 ... 5
Gordeon S. Grant, J. & S. Development 1 ... 15
Eddy-Ash Sts., James Cooper 1 ... 8
Mrs. Maude Grube, Flint Oil & Gas 1 15
F. Chebrough, Crescent Oil 1 ... 10
Birch Run—Unknown, Johnson & Co. 1 dry
W. J. Smith, Detroit interests 1 .... dry
Spaulding—Thomas Holhan, Charles Hunt & Co. 1. ... dry
Near Brandt—Eph Loackbridge, Vorhees & Sovereign 1 ... dry
Wells completed ... 27
Production ... 271
Dry ... 5
SHIAWASSEE COUNTY
Owosso Field—McGuinness, Sun Oil 1.. dry
Chapman, E. M. Treat & Co 1 ... dry
Pat Wade, Vorhees & Sovereign 1 ... dry
Wells completed ... 3
Dry ... 3
GRATIOT COUNTY
Ashley Field—Anderson, Sun Oil 1 .... dry
Unknown, Vorhees & Sovereign 1 ... dry
Unknown, Charles P. Brandt 1 ... dry
Wells completed ... 3
Dry ... 3
MUSKEGON COUNTY
Muskegon—Unknown, Muskegon Oil Corp. 1 ... dry
IOSCO COUNTY
Near Tawas—Robert Gage Coal Co. 1.hdry
WAYNE COUNTY
Near Trenton—W. E. Ellis 1 ... dry
VAN BUREN COUNTY
Near Decatur—A. D. Vought, Wert Oil & Gas 1 ... 5
MASON COUNTY
Ludington—Walhalla, Ludington Oil Corp. 1 ... dry
NEWAYGO COUNTY
Newaygo—Newaygo Prospecting 1 ... dry
SAGINAW COUNTY
Wells Drilling
Saginaw—Pere Marquette, Sun Oil 4.
Phelan St., Crowley & Co. 1.
Householder, F. W. Higginbotham, trustee 1.
Campau, Jack Hendricks & Co. 4.
Eddy estate, Saginaw Prospecting 7.
Swan Creek—O. K. Railey, E. M. Miller 1.
Chesaning—George Harris, Jack Hendricks & Co. 1.
Wells drilling, 7.
SHIAWASSEE COUNTY
Owosso Field—Gallagher-Schully, Sun Oil 1.
HURON COUNTY
Sebewaing—Henry Hafner, Pure Oil 1.
Kilmanagh—John Engelhard, Pure Oil 1.
Pigeon—Henry Kliemfield, Pure Oil 1.
Wells drilling, 3.
LIVINGSTONE COUNTY
Well Drilling
Conway—SE of Morris, Smith & Norris 1.
MUSKEGON COUNTY
Well Drilling
Muskegon—Muskegon Oil Corp. 2.
CRAWFORD COUNTY
Well Drilling
Near Grayling—Grayling Development 1.
CHARLEVOIX COUNTY
Well Drilling
Near Charlevoix & Trenton—Unknown parties 1.
MACOMB COUNTY
Well Drilling
Near Anchor Bay—Anchor Bay Oil 1.
MIDLAND COUNTY
Greendale—J. B. Raynor, Pure Oil 1.
ROSCOMMONS COUNTY
East of Roscommons—Grayling Development 1.

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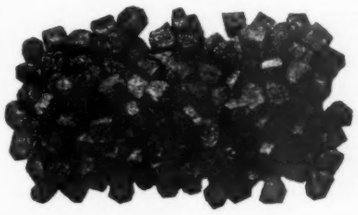
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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for September

Runs

Company—	Month	Dy. Av.
*Prairie P. L. Co.	4,440,000	148,000
Gulf P. L. Co.	1,520,497	50,683
Texas P. L. Co.	979,100	32,637
Magnolia Pet. Co.	1,800,476	60,016
Cosden P. L. Co.	1,042,868	34,795
Empire P. L. Co.	1,412,135	47,104
*Sinclair P. L. Co.	2,937,000	97,900
Oklahoma P. L. Co.	3,972,701	132,423
*Other lines	9,320,000	311,000
Total September	27,426,777	914,558
Total August	29,968,654	966,729

Shipments

Company—	Month	Dy. Av.
†Prairie P. L. Co.	5,321,180	177,373
Gulf P. L. Co.	1,037,883	34,596
Texas P. L. Co.	1,030,794	34,360
Magnolia Pet. Co.	1,822,192	60,740
Cosden P. L. Co.	1,128,668	37,622
Empire P. L. Co.	1,064,708	35,490
†Sinclair P. L. Co.	2,666,431	88,848
Oklahoma P. L. Co.	3,685,355	122,845
*Other lines	7,650,000	255,000
Total September	25,406,211	846,874
Total August	27,725,815	894,380

Stocks

*Prairie O. & G. Co.	30,600,000
*Prairie P. L. Co.	2,000,000
Gulf P. L. and Gypsy Oil Co.	9,525,009
The Texas Company	5,044,860
Magnolia Pet. Co.	6,062,711
Cosden P. L. Co.	3,188,696
Empire P. L. Co.	4,570,658
*Sinclair Crude Oil Pur. Co.	20,000,000
Oklahoma P. L. Co.	2,585,504
Carter Oil Co.	15,988,647
*Other lines	10,000,000
Total September	109,566,085
Total August	107,372,988
Difference	2,193,097

*Estimated. †Prairie Pipe Line shipments include Texas crude oil and Sinclair Pipe Line shipments include Texas and Wyoming crude oil.

Note: Stocks do not include approximately 5,000,000 bbls. of crude oil held in storage on private tank farms and leases, and approximately 1,750,000 bbls. of Texas Panhandle crude held in storage in Kansas and Oklahoma.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug. '27	Sept. '27
National Transit	146,479.36	148,770.19
S. W. Pa. P. L.	86,548.23	85,669.19
Eureka P. L.	395,237.23	386,201.76
Buckeye P. L. (Macksburg)	243,331.35	224,616.49
Buckeye P. L. (Cleveland)	11,953.23	11,430.57
Buckeye P. L. (Lima, etc.)	129,837.26	124,867.84
Indiana P. L.	8,905.59	9,150.58
Cumberland P. L.	267,515.04	245,038.71
N. Y. Transit	25,038.15	22,882.06
Tidewater P. L.	197,502.70	185,881.97
Pure Oil	164,866.70	159,336.57
Emery P. L.	59,569.14	57,479.57
Paragon Dev.	30,553.65	34,062.15
Pittsburgh P. L.	4,824.41	4,956.74
Stoll Oil Ref.	16,831.15	15,315.87
Total	1,886,993.19	1,808,560.83
Daily average	60,870.42	60,285.39

Note—Indian Refining Co. also reported other receipts of 275,293.93 bbls. Paragon Refining Co. had other receipts of 202,741.28 bbls. Paragon Development had other receipts of 24,753.46 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular diliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug. '27	Sept. '27
National Transit	344,799.78	353,363.94
S. W. Pa. P. L.	343,310.98	352,236.47
Eureka P. L.	158,755.14	181,661.67
Buckeye P. L. (Macksburg)	153,543.57	144,078.47
Buckeye P. L. (Cleveland)	727.48	971.43
Buckeye P. L. (Lima, etc.)	748,093.86	861,075.43
Indiana P. L.	866,709.30	840,001.40
Cumberland P. L.	150,233.43	141,736.84
N. Y. Transit	289,844.19	316,049.51
Northern P. L.	196,321.58	188,878.47
Tidewater P. L.	150,113.65	133,684.94
Pure Oil	205,913.45	176,414.97
Emery P. L.	54,557.91	59,423.76
Paragon Ref.	177,675.03	202,284.13
Indian Ref.	379,066.53	343,732.80
Paragon Dev.	31,192.30	26,388.58
Pittsburgh P. L.	5,396.27	5,410.13
Total	4,298,243.43	4,326,377.16
Daily average	138,653.01	144,212.57

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of August and September:

	Aug. '27	Sept. '27
National Transit	1,129,180.77	1,154,733.90
S. W. Pa. P. L.	633,536.23	648,789.30
Eureke P. L.	1,949,985.99	1,803,065.25
Buckeye P. L. (Macksburg)	416,688.27	421,560.39
Buckeye P. L. (Cleveland)	39,918.38	50,899.14
Buckeye P. L. (Lima, etc.)	4,668,115.54	4,829,631.04
Indiana P. L.	620,873.22	621,233.99
Cumberland P. L.	591,843.81	614,472.34
Southern P. L.	429,471.53	466,091.05
N. Y. Transit	460,932.97	507,169.10
Northern P. L.	470,103.63	534,035.12
Pure Oil	395,429.71	400,830.33
Emery P. L.	13,506.50	13,401.24
Paragon Ref.	15,696.20	15,860.76
Indian Ref.	93,156.64	122,910.52
Paragon Dev.	6,821.39	6,145.06
Pittsburgh P. L.	3,864.26	3,978.00
Total	11,989,115.18	12,212,716.43
Increase	535,987.31	223,601.25

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of August and September, showing the gross stocks of the above fields:

	Aug. '27	Sept. '27
Pennsylvania	4,238,474.19	4,235,065.03
Lima	1,018,062.71	1,078,066.53
Kentucky	1,134,629.10	1,144,347.96
Mid-Continent	6,531,964.28	6,691,414.41
Illinois	65,894.90	63,822.51
Total	11,989,115.18	12,212,716.43

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
Jan.	62,638	56,821	55,630	56,209
Feb.	65,923	60,606	60,394	61,295
Mar.	66,731	60,575	61,644	63,247
April	71,058	63,063	63,019	66,327
May	63,943	59,217	60,550	60,284
June	63,339	61,270	64,131	63,757
July	64,308	62,439	63,208	58,574
Aug.	59,943	59,886	61,218	60,270
Sept.	62,930	62,510	64,439	60,295
Oct.	64,976	60,995	62,704	.....
Nov.	56,283	59,350	61,774	.....
Dec.	55,814	57,974	58,755	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
Jan.	145,518	157,889	150,056	141,227
Feb.	148,733	160,863	159,485	138,534
Mar.	147,098	154,591	150,239	133,777
April	147,611	151,439	152,871	140,227
May	134,997	146,995	160,998	144,894
June	143,010	149,467	160,257	149,773
July	134,187	161,338	160,945	151,350
Aug.	123,120	161,730	151,923	138,652
Sept.	127,225	156,719	158,915	144,212
Oct.	123,170	145,388	161,132	.....
Nov.	124,400	143,582	152,668	.....
Dec.	161,392	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
Jan.	11,353,276	9,959,170	9,718,902
Feb.	11,192,934	9,579,354	10,119,162
Mar.	11,158,297	9,438,292	10,794,044
April	11,062,082	9,805,851	11,113,296
May	11,207,562	9,521,757	11,359,381
June	11,092,796	9,585,904	11,493,673
July	11,067,453	9,734,687	11,453,128
Aug.	10,974,481	9,668,947	11,989,115
Sept.	10,781,753	9,433,732	12,212,716
Oct.	11,086,850	9,269,806	.....
Nov.	11,068,158	9,257,667	.....
Dec.	10,458,445	9,464,513	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

	Runs	Shipments	Stocks
1926—			
Sept.	2,788.18	3,273.06	13,985.68
Oct.	2,991.86	2,307.75	14,671.25
Nov.	2,810.60	1,664.55	15,817.31
Dec.	2,847.52	5,561.11	13,103.72
1927—			
Jan.	2,641.54	1,470.42	14,274.84
Feb.	2,764.20	1,082.82	15,856.24
Mar.	2,687.30	1,878.56	16,664.98
April	2,824.23	1,512.65	17,986.54
May	2,768.47	539.29	20,215.72
June	2,946.29	664.40	22,497.61
July	3,153.39	1,276.61	24,374.39
Aug.	3,057.89	8,713.11	18,719.17
Sept.	3,309.56	2,656.48	19,372.25

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, October 1	3,063,013.95
Other receipts	243,655.75
Runs from wells	591,099.13
Regular deliveries	495,432.70
Other deliveries	483,089.11

The amount of Illinois oil run by the Tidewater Pipe Co. in September was 28,-580.36 bbls. and deliveries were 27,779.79 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1926—		
September	618,798.66	516,083.05
October	681,648.96	531,467.39
November	661,263.33	498,439.57
December	668,909.58	537,947.61
1927—		
January	621,421.03	530,085.98
February	596,831.16	476,960.71
March	727,593.91	554,447.43
April	592,225.97	444,818.49
May	738,769.40	543,192.02
June	640,975.85	532,217.78
July	613,901.30	484,902.58
August	651,276.40	539,281.37
September	619,589.49	433,212.49

Tidewater Pipe Co., Ltd., also delivered in September 216,229.09 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
May	10,452	7,645	18,387	9,226	6,226	51,935	.....	.....	.....	.....	.....		$1,935
June	25,567	11,233	48,833	17,367	17,367	120,367	.....	.....	.....	.....	.....		120,367
July	13,484	17,290	33,065	9,129	5,451	78,419	.....	.....	.....	968	968		79,387
August	18,516	3,065	48,129	17,323	26,000	113,032	.....	.....	.....	.....	.....		113,032
September	22,033	6,967	51,400	14,567	19,533	116,500	.....	.....	.....	.....	.....		116,500

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
May	21,032	9,807	93,462	7,774	23,580	155,645	1,807	30,612	1,936	.....	34,355		190,000
June	18,167	9,700	83,867	10,900	16,567	139,200	2,000	31,800	.....	.....	33,800		173,000
July	22,226	10,387	80,193	7,193	28,710	158,710	3,226	25,065	806	.....	29,096		187,806
August	19,323	9,022	80,903	14,258	31,821	155,387	2,097	31,161	.....	.....	23,258		178,645
September	28,033	11,433	85,500	12,800	37,700	175,467	6,667	19,233	.....	3,600	28,500		203,967

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
1926—										
October:	Month	18,966,058	15,720,689	19,001,388	3,714,637	4,625,138	2,166,569	3,071,720	3,398,000	70,664,189
	Daily average	611,808	507,119	612,948	119,827	149,198	69,889	99,088	109,613	2,279,490
November:	Month	19,173,138	16,876,950	18,593,160	3,593,490	4,299,480	2,054,911	2,842,587	3,216,000	70,649,706
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,276,950	17,382,908	19,753,591	3,654,156	4,266,189	2,018,734	2,658,301	3,313,000	73,323,829
	Daily average	654,095	576,868	637,312	117,876	137,619	65,120	85,752	106,871	2,381,414
1927—										
January:	Month	20,184,872	19,036,426	18,605,363	3,769,879	4,070,469	1,905,570	2,620,303	3,332,500	73,530,382
	Daily average	651,125	614,046	600,173	121,609	131,499	61,470	84,203	107,500	2,371,948
February:	Month	17,982,711	19,752,348	16,483,712	3,352,076	3,574,256	1,784,104	2,385,135	2,907,200	68,321,542
	Daily average	642,240	705,441	588,704	119,717	127,662	63,718	85,183	107,400	2,440,057
March:	Month	19,835,724	22,480,921	18,232,617	3,675,143	3,853,920	2,032,982	2,476,798	3,325,800	75,923,905
	Daily average	639,862	725,191	588,149	118,553	124,320	65,580	79,574	105,100	2,449,158
April:	Month	19,493,825	22,208,130	17,801,140	3,516,930	3,378,240	1,994,330	2,615,770	3,474,000	74,482,365
	Daily average	648,870	740,271	593,371	117,231	112,608	66,491	87,192	115,800	2,482,745
May:	Month	19,506,954	23,255,463	19,539,088	3,704,314	3,492,669	1,935,175	2,742,588	3,467,000	77,646,346
	Daily average	629,238	750,273	630,293	119,494	112,699	62,425	88,471	111,839	2,504,721
June:	Month	19,181,442	22,320,330	18,299,810	3,427,580	3,365,760	1,880,820	2,892,427	3,320,000	76,018,179
	Daily average	639,381	761,011	613,327	114,586	112,192	62,694	86,414	111,000	2,500,606
July:	Month	19,219,021	26,522,546	17,607,194	3,454,082	3,406,683	2,279,405	2,635,607	3,372,000	78,597,538
	Daily average	623,194	855,566	567,974	111,422	109,893	73,529	85,020	108,806	2,535,401
August:	Month	19,279,121	26,283,350	17,715,229	3,424,570	3,242,600	2,199,905	2,530,065	3,608,400	78,283,260
	Daily average	621,907	847,850	571,459	110,470	104,600	70,964	81,615	116,400	2,525,266
September:	Month	19,084,500	24,111,660	18,322,800	3,342,240	3,032,970	2,027,070	2,238,609	3,345,000	75,484,849
	Daily average	636,483	803,722	610,760	111,408	101,099	67,569	74,620	111,500	2,512,828
Total 12 months		232,271,918	256,963,731	220,955,087	42,639,097	44,615,374	24,279,565	31,409,830	40,199,900	893,436,980

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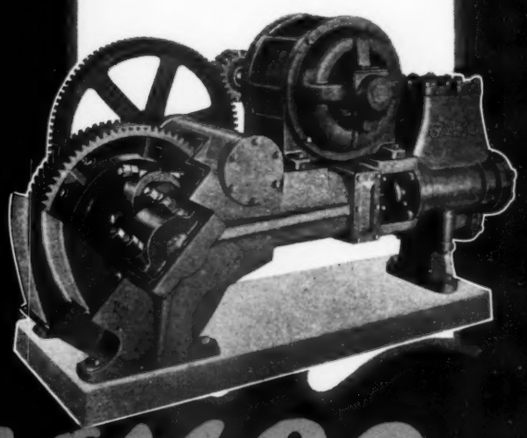

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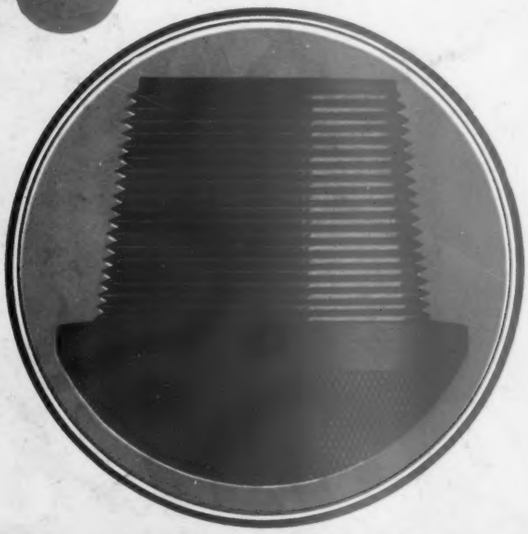

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